पर्यावरण अध्ययन

देखें, करें और सीखें

कक्षा 3 के लिए पाठ्यपुस्तक

दलजीत गुप्ता
मंजु जैन
स्वर्णा गुप्ता

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING

प्राक्कथन

पाठ्यचर्या, पाठ्यक्रम एवं पाठ्यसामग्री का निर्माण एक सतत् प्रक्रिया है। समय-समय पर भिन्न-भिन्न क्षेत्रों में विकास एवं बदलती आवश्यकताओं के कारण विषयवस्तु में परिवर्तन आता रहता है। अतः पाठ्यक्रम में नवीनीकरण आवश्यक हो जाता है। प्रस्तुत पाठ्यपुस्तक राष्ट्रीय शिक्षा नीति 1986 के क्रियान्वयन के पश्चात् प्राप्त अनुभवों के आधार पर उल्लिखित आकांक्षाओं की अधिक सार्थक पूर्ति की दिशा में एक प्रयास है।

प्राथमिक स्तर के बच्चों के विकासात्मक विशेषताओं का विश्लेषण स्पष्ट करता है कि इस आयु-वर्ग के बच्चे अपने परिवेश को समग्र रूप से देखते हैं, भागों में नहीं। पिछले दशक में किए गए शोध अध्ययनों में प्राथमिक स्तर के पाठ्यक्रम का बोझ इस अवस्था के बच्चों की मानसिक आयु से ज्यादा पाया गया। विभिन्न तथ्यों को ध्यान में रखते हुए प्राथमिक स्तर के परिवेश अध्ययन के पाठ्यक्रम में भी बदलाव की सिफारिशें की गई हैं। इन सिफारिशों में कक्षा 1 और 2 में हिंदी, गणित विषयों के साथ पर्यावरण संबंधी क्रियाकलापों के समेकीकरण की संस्तुति की गई। कक्षा तीन से पाँच में पर्यावरण अध्ययन को एक स्वतंत्र विषय के रूप में रखा गया है। इस क्रम में पर्यावरण अध्ययन विषय के पाठ्यक्रम को समेकित अथवा संगठित रूप में तैयार किया गया है जिसमें सामाजिक अध्ययन (सामाजिक परिवेश) और विज्ञान (प्राकृतिक परिवेश) विषयों को समग्र रूप में प्रस्तुत किया गया है। इन सिफारिशों पर आधारित पर्यावरण अध्ययन विषय के अंतर्गत कक्षा 3 के लिए तैयार की गई यह पाठ्यपुस्तक-एवं-पाठ्यक्रिया पुस्तक **देखें, करें और सीखें** इस शृंखला की पहली कड़ी है।

बच्चों का परिवेश एक-सा नहीं होता। भिन्न-भिन्न जगहों पर रहने के कारण सामाजिक, भौतिक एवं प्राकृतिक भिन्नताएँ उनके परिवेश में स्वाभाविक हैं। इसीलिए किसी भी पाठ्यपुस्तक की विषयवस्तु सभी बच्चों के लिए पूर्णतः उपयुक्त नहीं हो सकती। इन सीमाओं को ध्यान में रखते हुए प्रस्तुत पाठ्यसामग्री में पाठ्यवस्तु को साधन के रूप में प्रयुक्त किया है। साथ ही पाठ्यवस्तु का केंद्र-बिंदु प्रक्रिया एवं क्रियाकलाप है, अतः प्रयुक्त पाठ्यवस्तु मात्र उदाहरण है, अंत नहीं है। प्राथमिक स्तर के बच्चे विविधता चाहते है और बच्चों में रुचि उत्पन्न करने तथा उसे बनाए रखने के लिए प्रस्तुत विषयवस्तु का प्रस्तुतिकरण भिन्न-भिन्न तरीकों से किया गया है, जैसे – कहीं संवाद, कहीं अध्यापक से बातचीत करके, कहीं कक्षा-कक्ष के बाहर ले जाकर आदि। बच्चों में अवलोकन और स्वतंत्र चिंतन कौशलों को विकसित करने के लिए कहीं-कहीं विषयवस्तु को चित्रों के माध्यम से भी आगे बढ़ाया गया है।

प्रस्तुत पुस्तक केवल मात्र पाठ्यपुस्तक नहीं है। विषयवस्तु को अनुभव आधारित तथा मानसिक प्रक्रियाओं के विकास के लिए पुस्तक को पाठ्यपुस्तक-एवं-क्रियाकलाप पुस्तक के रूप में विकसित किया है। विषयवस्तु के साथ-साथ प्रत्येक पाठ के अंत में **हमने क्या सीखा** दिया गया है जिसमें विभिन्न प्रकार के प्रश्न दिए गए हैं जो कि बच्चे को क्रियाशील बनाए रखने के साथ-साथ सजृनात्मक विकास में भी सहायक होंगे। अध्यापक को पढ़ने-पढ़ाने की स्वतंत्रता देने के साथ-साथ कुछ शिक्षण-संकेत भी प्रत्येक इकाई के प्रारंभ में दिए गए हैं। आशा है वह उनके लिए उपयोगी होंगे।

प्रस्तुत पुस्तक का प्रारूप प्रारंभिक शिक्षा विभाग द्वारा तैयार किया गया है। इस पुस्तक को इस रूप में लाने के लिए देश के विभिन्न भागों से आए अध्यापकों, विषय विशेषज्ञों, शिक्षण विशेषज्ञों, भाषा विशेषज्ञों ने समय-समय पर आयोजित कार्यशालाओं, संगोष्ठियों में भाग लिया और उनके द्वारा दिए गए सुझावों से पुस्तक को और अधिक परिमार्जित एवं परिष्कृत किया गया। मैं इस पुस्तक के प्रणयन में योगदान देने वाले प्रारंभिक शिक्षा विभाग, राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद् के सदस्यों और अन्य आमंत्रित विशेषज्ञों के प्रति आभार व्यक्त करता हूँ।

आशा है कि यह पाठ्यसामग्री बच्चों के लिए रुचिकर एवं लाभदायक सिद्ध होगी। इस पुस्तक के लिए सभी प्रकार की समालोचनाओं एवं सुझावों का स्वागत है। पुस्तक के पुनः संपादन के समय परिषद् प्राप्त सुझावों पर विशेष ध्यान देगी।

जगमोहन सिंह राजपूत
निदेशक
राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्

फरवरी 2002
नई दिल्ली

दो शब्द अध्यापक बंधुओं से

पर्यावरण अध्ययन विषय के अंतर्गत कक्षा तीन के लिए तैयार की गई नई पाठ्यपुस्तक **देखें, करें और सीखें** इस श्रृंखला की पहली पुस्तक है। इस पाठ्यपुस्तक के विकास से जुड़े हुए कुछ प्रमुख बिंदुओं का उल्लेख नीचे किया गया है।

यह पाठ्यपुस्तक क्यों लिखी गई?

प्राथमिक स्तर के बच्चों की विकासात्मक विशेषताओं का विश्लेषण स्पष्ट करता है कि इस आयु-वर्ग के बच्चे अपने परिवेश को समग्र रूप में देखते है, भागों में नहीं। पिछले दशक में किए गए शोध अध्ययनों में इस स्तर के पाठ्यक्रम का बोझ भी ज्यादा पाया गया। इन तथ्यों को ध्यान में रखते हुए पर्यावरण शिक्षा के पाठ्यक्रम पर पुनः विचार किया गया और अब इस विषय के पाठ्यक्रम को संगठित रूप में तैयार किया गया है। पहली और दूसरी कक्षाओं में इसके मुख्य बिंदुओं को भाषा, गणित तथा स्वस्थ एवं उत्पादक जीवन की कला-विषयों में समेकित किया गया है और कक्षा 3 से कक्षा 5 तक पर्यावरण अध्ययन एक अलग विषय के रूप में रखा गया है। इन कक्षाओं के लिए नई पाठ्यपुस्तकों का निर्माण अब इस विषय की पुनः कथित परिभाषा को आधार बनाकर किया जा रहा है। **देखें, करें और सीखें** इस श्रृंखला की पहली पाठ्यपुस्तक है।

पुरानी पाठ्यपुस्तक से कैसे भिन्न?

- हम सभी जानते हैं कि हमारे आस-पास का परिवेश सभी जगह एक-सा नहीं है। प्राकृतिक भिन्नताओं के कारण अलग-अलग भागों का मौसम, वहाँ की उपज, लोगों का रहन-सहन, खान-पान आदि भी भिन्न-भिन्न है। इसलिए किसी भी पाठ्यपुस्तक की पाठ्यवस्तु अलग-अलग जगह रहने वाले बच्चों के लिए बहुत ज्यादा उपयुक्त नहीं हो सकती। वातावरण में भिन्नताओं के कारण इस पाठ्यपुस्तक में प्रक्रियाओं एवं क्रियाकलापों को प्रमुख स्थान दिया गया है, पाठ्यवस्तु को एक साधन और उदाहरण के रूप में प्रयोग किया गया है। अतः आपको पाठ्यवस्तु बच्चों के परिवेश के अनुरूप ही जुटानी होगी। यह पाठ्यपुस्तक आपके लिए एक 'सहायिका' है 'अंत' नहीं'।
- इस पाठ्यपुस्तक में विषयवस्तु का चयन, उसका स्तर एवं उसका प्रस्तुतीकरण भी भिन्न है। इस आयु-वर्ग के बच्चों के संज्ञानात्मक विकास को ध्यान में रखकर इसका चयन किया गया है।
- पाठ्यपुस्तक में विषयवस्तु के प्रस्तुतीकरण में प्रक्रियाओं एवं कौशल-विकास को महत्त्व दिया गया है। इनके विकास के लिए बच्चे को विभिन्न अनुभव जैसे क्रियाकलापों (सामूहिक एवं व्यक्तिगत), मूर्त वातावरण का अनुभव, स्वयं के अनुभवों, चित्रों एवं मॉडलों का उपयोग (अगर वास्तविक वस्तु उपलब्ध न हो तो) आदि देने का प्रयत्न किया गया है। इस तरह वह अपने परिवेश के भिन्न-भिन्न घटकों को अपने साथियों के साथ मिलजुल कर अथवा अपने आप देखेगा, खोजेगा, करेगा और सीखेगा।

- इस आयु के बच्चों की रुचि बनाए रखने के लिए विविधता जरूरी है। अतः बच्चों में रुचि उत्पन्न करने तथा उसे बनाए रखने के लिए विषयवस्तु के प्रस्तुतीकरण में भिन्न-भिन्न प्रकार के तरीकों का उपयोग किया गया है, जैसे – कही संवाद से, कहीं बच्चों को स्वयं बुलवाकर, कहीं अध्यापक से बातचीत करवाकर, अथवा आपस में बातचीत करवाकर, या कक्षा-कक्ष के बाहर ले जाकर। बहुत जगह चित्रों द्वारा पाठ्यवस्तु को आगे बढ़ाया गया है। ऐसा बच्चों में अवलोकन और स्वतंत्र चिंतन के कौशलों को विकसित करने के लिए किया गया है।

आपके लिए क्या भिन्न?

इस पाठ्यपुस्तक को देखकर हो सकता है आपको अपना काम कठिन लगे, परंतु जब आप इस पुस्तक का उपयोग शुरू करेंगे तो आप पाएंगे कि आपका काम आसान होने के साथ-साथ बहुत रुचिकर भी हो गया है।

- अब आपको ज्यादा समय पाठ्यपुस्तक पढ़ानी नहीं है बल्कि बच्चों के सीखने की प्रक्रिया में सहायता करनी है।
- पाठ्यपुस्तक में बहुत-सी क्रियाएँ (क्रियाकलाप) बच्चों से करवाने के लिए दी गई हैं। प्रत्येक बच्चे को उन क्रियाओं में भाग लेने का अवसर दें। क्रियाओं में भाग लेते समय जहाँ बच्चे को कठिनाई हो, उसकी उसी समय सहायता करना बहुत ज़रूरी होगा।
- जहाँ तक हो सके पाठ्यपुस्तक में दी पाठ्यवस्तु और क्रियाओं से अपेक्षित उपलब्धियों को बच्चों के परिवेश से जोड़कर सिखाएँ। दी गई क्रियाओं के अतिरिक्त आप इसी स्तर के अन्य क्रियाकलाप भी करवा सकते हैं।
- प्रत्येक बच्चा कितना सीख पाया, कहाँ उसे कठिनाई आई, ये तो आप शिक्षण-अधिगम प्रक्रिया के दौरान किसी भी समय जान सकते हैं। आप से यह अपेक्षा की जाती है कि प्रत्येक बच्चे को उसकी आवश्यकता के अनुसार समय-समय पर सहायता देते रहें।
- प्रत्येक इकाई से पहले एक संक्षिप्त संकेत-लेख दिया गया है। इसमें इकाई को पाठ्यपुस्तक में देने के कारणों के बाद बच्चों में अपेक्षित व्यवहार परिवर्तन और कौशल विकास के साथ-साथ आपके लिए भी कुछ सुझाव दिए गए हैं। परंतु ये सुझाव केवल संकेत-मात्र हैं। आप अपनी स्वतंत्र सोच एवं अनुभव आधारित तरीकों से प्रत्येक पाठ को पढ़ा सकते हैं।

हम सब जानते हैं कि प्रत्येक अध्यापक अपने आप में अद्वितीय होता है। उसके पास हर बच्चे के गुणों को पनपने में सहायता करने के लिए विभिन्न तरीकों अथवा किसी भी कठिनाई का हल ढूँढ़ने की इच्छा अवश्य होती है। मनुष्य का यह गुण (समस्या का हल ढूँढ़ना) ही तो उसकी अमूल्य निधि है। यही गुण प्रत्येक बच्चे में पनपने में सहायता करना ही पर्यावरण अध्ययन का मूल उद्देश्य है। ऐसा करके हम हर बच्चे को अपने परिवेश के प्रति सजग और संवेदनशील बनाने में सहायता कर सकते हैं।

पांडुलिपि समीक्षा-संशोधन कार्यगोष्ठी के सदस्य

1. प्रो. सुमन पी. करंदीकर
   999 बी, नियोजन, फाटक बंग
   नवी पेठ, पुणे
2. डॉ एच.पी. राज गुरु
   ई/8/ टी.एच. 27, आकाश गंगा कालोनी
   शाहपुरा फेज -2, भोपाल
3. डॉ. टी.के. श्रीवास्तव
   निदेशक, जनकल्याण आश्रम, ग्राम चांदापुर
   शांहजहांपुर, उत्तर प्रदेश
4. डॉ ललित पांड्ये
   उत्तराखण्ड सेवा निधि, पर्यावरण सेवा संस्थान
   अल्मोड़ा, उत्तरांचल
5. प्रो. ए.बी. सक्सेना
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   अजमेर
6. सुश्री अंशु श्रीवास्तव
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   डी.एम.स्कूल, क्षेत्रीय शैक्षिक संस्थान, भोपाल
7. श्रीमती संयुक्ता लूदरा
   सी-20 के, गंगोत्री अपार्टमेंट, अलकनन्दा
   नई दिल्ली
8. श्री अशोक कुमार, टी.जी.टी. (नेचुरल साइंस)
   राजकीय उच्चतर माध्यमिक बाल विद्यालय
   ए ब्लाक, जनकपुरी, नई दिल्ली
9. श्री अशोक कुमार सेठ, प्रवक्ता (जीव विज्ञान)
   राजकीय सर्वोदय बाल विद्यालय
   विवेक विहार, दिल्ली
10. डॉ. कृष्ण कुमार मदान, प्रवक्ता (रसायन शास्त्र)
    राजकीय सर्वोदय बाल विद्यालय नं. 1
    झील कुरंजा, दिल्ली
11. श्री राजीव कुमार विश्नोई, टी.जी.टी. (नेचुरल साइंस)
    राजकीय प्रतिभा विकास विद्यालय
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12. श्रीमती बलजीत कौर
    अध्यापिका, निगम प्राथमिक विद्यालय
    लाडो सराय, महरौली, नई दिल्ली
13. श्रीमती रश्मि अग्रवाल
    मॉर्डन स्कूल, वसंत विहार
    नई दिल्ली
14. डॉ. डी.पी. शर्मा, निदेशक
    आई.आर.ई.पी ए-134,
    आनंद विहार, दिल्ली
15. श्रीमती रचना जैन
    प्राइमरी टीचर, केंद्रीय विद्यालय, जे.एन.यू.
    एन.सी.ई.आर.टी कैम्पस, नई दिल्ली
16. श्रीमती बन्दना चौधरी
    रामजस स्कूल, सैक्टर 4, आर.के.पुरम
    नई दिल्ली
17. श्रीमती रागिनी श्रीवास्तव
    भारतीय विद्या भवन, मेहता विद्यालय
    कस्तूरबा गाँधी मार्ग, नई दिल्ली
18. डॉ. एस.सी. चौहान
    प्रवक्ता, डी.ई.जी.एस.एन.
    एन.सी.ई.आर.टी., नई दिल्ली

एन.सी.ई.आर.टी., प्रारंभिक शिक्षा विभाग

1. प्रो. के.के. वशिष्ठ
2. डॉ दलजीत गुप्ता
3. डॉ मंजु जैन **(संयोजक)**
4. डॉ स्वर्णा गुप्ता
5. श्रीमती रोमिला सोनी

भारत का संविधान

उद्देशिका

हम, भारत के लोग, भारत को एक [1][**संपूर्ण प्रभुत्व-संपन्न समाजवादी पंथनिरपेक्ष लोकतंत्रात्मक गणराज्य**] बनाने के लिए, तथा उसके समस्त नागरिकों को :

सामाजिक, आर्थिक और राजनैतिक **न्याय,**

विचार, अभिव्यक्ति, विश्वास, धर्म

और उपासना की **स्वतंत्रता,**

प्रतिष्ठा और अवसर की **समता**

प्राप्त कराने के लिए,

तथा उन सब में

व्यक्ति की गरिमा और [2][राष्ट्र की एकता

और अखंडता] सुनिश्चित करने वाली **बंधुता**

बढ़ाने के लिए

दृढ़संकल्प होकर **अपनी इस संविधान सभा में** आज तारीख 26 नवंबर, 1949 ई० **को एतद्द्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।**

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1. संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977 से) "प्रभुत्व-संपन्न लोकतंत्रात्मक गणराज्य" के स्थान पर प्रतिस्थापित।
2. संविधान (बयालीसवां संशोधन) अधिनियम, 1976 की धारा 2 द्वारा (3.1.1977 से) "राष्ट्र की एकता" के स्थान पर प्रतिस्थापित।

भाग 4 क

मूल कर्तव्य

51 क. **मूल कर्तव्य** – भारत के प्रत्येक नागरिक का यह कर्त्तव्य होगा कि वह –

(क) संविधान का पालन करे और उसके आदर्शों, संस्थाओं, राष्ट्र ध्वज और राष्ट्र गान का आदर करे;

(ख) स्वतंत्रता के लिए हमारे राष्ट्रीय आंदोलन को प्रेरित करने वाले उच्च आदर्शों को हृदय मे संजोए रखे और उनका पालन करे;

(ग) भारत की प्रभुता, एकता और अखंडता की रक्षा करे और उसे अक्षुण्ण रखे;

(घ) देश की रक्षा करे और आह्वान किए जाने पर राष्ट्र की सेवा करे;

(ङ) भारत के सभी लोगों में समरसता और समान भ्रातृत्व की भावना का निर्माण करे जो धर्म, भाषा और प्रदेश या वर्ग पर आधारित सभी भेदभाव से परे हो, ऐसी प्रथाओं का त्याग करे जो स्त्रियों के सम्मान के विरुद्ध हैं;

(च) हमारी सामासिक संस्कृति की गौरवशाली परंपरा का महत्व समझे और उसका परिरक्षण करे;

(छ) प्राकृतिक पर्यावरण की जिसके अंतर्गत वन, झील, नदी, और वन्य जीव हैं, रक्षा करे और उसका संवर्धन करे तथा प्राणि मात्र के प्रति दयाभाव रखे;

(ज) वैज्ञानिक दृष्टिकोण, मानववाद और ज्ञानार्जन तथा सुधार की भावना का विकास करे;

(झ) सार्वजनिक संपत्ति को सुरक्षित रखे और हिंसा से दूर रहे;

(ञ) व्यक्तिगत और सामूहिक गतिविधियों के सभी क्षेत्रों में उत्कर्ष की ओर बढ़ने का सतत प्रयास करे जिससे राष्ट्र निरंतर बढ़ते हुए प्रयत्न और उपलब्धि की नई ऊंचाइयों को छू ले।

विषय-सूची

गांधी जी का जन्तर

तुम्हें एक जन्तर देता हूं। जब भी तुम्हें सन्देह हो या तुम्हारा अहम् तुम पर हावी होने लगे, तो यह कसौटी आजमाओ :

जो सबसे गरीब और कमजोर आदमी तुमने देखा हो, उसकी शकल याद करो और अपने दिल से पूछो कि जो कदम उठाने का तुम विचार कर रहे हो, वह उस आदमी के लिए कितना उपयोगी होगा। क्या उससे उसे कुछ लाभ पहुंचेगा ? क्या उससे वह अपने ही जीवन और भाग्य पर कुछ काबू रख सकेगा ? यानि क्या उससे उन करोड़ों लोगों को स्वराज्य मिल सकेगा जिनके पेट भूखे हैं और आत्मा अतृप्त है ?

तब तुम देखोगे कि तुम्हारा सन्देह मिट रहा है और अहम् समाप्त होता जा रहा है।

अध्याय 1

पर्यावरण के घटक

पर्यावरण का शाब्दिक अर्थ है किसी जीव, समुदाय या वस्तु के चारों ओर का वातावरण। परंतु पर्यावरण सर्वत्र एक-सा नहीं होता अपितु विभिन्न स्थानों पर भिन्न-भिन्न होता है। यदि हम भारत का उदाहरण लें, तो इसके विभिन्न भागों में अनेक प्रकार की परिस्थितियाँ पाई जाती हैं। हिमालय का पर्वतीय पर्यावरण थार के मरुस्थलीय पर्यावरण या सुंदरवन के डेल्टाई पर्यावरण से बहुत भिन्न है। एक प्रकार का पर्यावरण धान उगाने के लिए उपयुक्त है, तो दूसरा गेहूँ या रागी के लिए उपयुक्त है। इसी प्रकार भोजन की आदतें, आर्थिक क्रियाएँ तथा लोगों की वेष-भूषा भी एक क्षेत्र से दूसरे क्षेत्र में बदलती रहती हैं।

पेड़-पौधे, जीव-जंतु तथा मानव किसी प्रदेश के भौतिक अथवा प्राकृतिक पर्यावरण से प्रभावित होते हैं। भौतिक पर्यावरण क्या है ? किसी स्थान पर पाई जाने वाली स्थल, जल तथा वायु की प्राकृतिक दशाओं को भौतिक पर्यावरण कहते हैं। स्थल भाग पर्वत, पठारों, मैदानों तथा घाटियों से बना हो सकता है। इसी प्रकार जल भागों के अंतर्गत छोटे पोखरों या तालाबों से लेकर विस्तृत महासागर, झीलें तथा नदियाँ सम्मिलित होती हैं। जैविक पर्यावरण में मनुष्य, जीव-जंतु, पेड़-पौधे तथा जीवाणु सम्मिलित होते हैं। पर्यावरण के ये दोनों घटक — भौतिक तथा जैविक — एक-दूसरे पर निर्भर होते हैं। इन्हें पूर्णतया अलग नहीं किया जा सकता। ये आपस में जुड़े हुए हैं और निरंतर एक-दूसरे

हमें अपने पर्यावरण की सुरक्षा क्यों करनी चाहिए?

पर्यावरण हमारे जीवन का सहायक आधार है। यह हमें साँस लेने के लिए वायु, पीने के लिए जल, खाने के लिए भोजन और रहने के लिए भूमि देता है। यह हमें लकड़ी, ईंधन, ऊर्जा तथा खनिज जैसे प्राकृतिक संसाधन देता है।

अधिकांश मानवीय क्रियाएँ पर्यावरण को किसी न किसी रूप में प्रभावित करती हैं।

वनों, चरागाहों तथा खेतों जैसे संसाधनों के अनुचित अथवा अति उपयोग के कारण पर्यावरण के ये अंग पहले ही क्षतिग्रस्त हो चुके हैं।

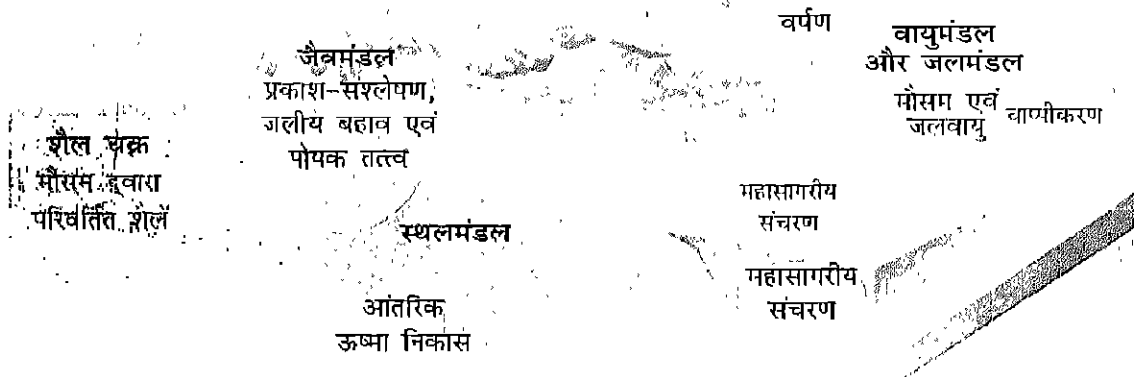
यदि हम ऐसा ही करते रहेंगे तो क्षति अपूरणीय होगी और परिणाम बहुत भयानक होंगे।

को प्रभावित करते रहते हैं। भौतिक या प्राकृतिक पर्यावरण में अंतर हो जाने से जैविक पर्यावरण में भी अंतर आ जाता है।

हमको यह भी ज्ञात होना चाहिए कि पर्यावरण के ये संघटक सदैव स्थिर नहीं रहते। उनमें निरंतर परिवर्तन होता रहता है। ये परिवर्तन धीमी गति से हो सकते हैं, परंतु कभी-कभी ये अचानक भी होते हैं।

हम पर्यावरण को मुख्य रूप से चार परिमंडलों में विभाजित कर सकते हैं — **वायुमंडल, स्थलमंडल, जलमंडल** तथा **जैवमंडल**।

वायुमंडल वायु की वह पतली परत है जो हमारी पृथ्वी को घेरे हुए है। इसकी प्रकृति बहुत ही परिवर्तनशील है। वायुमंडल में होने वाले ये परिवर्तन मौसम या ऋतुओं को जन्म देते हैं जो हमें प्रत्यक्ष और परोक्ष रूप से प्रभावित करते हैं। मौसम के माध्यम से जलवायु का निर्माण होता है जो स्थल आकृतियों, मृदा विकास, वनस्पति की प्रकृति तथा लोगों के क्रियाकलापों से संबंधित विभिन्न प्रक्रमों को प्रभावित करता है। वायुमंडल की मोटाई या ऊँचाई सर्वत्र एक समान नहीं है। इसमें कई परतें हैं जिनके विषय में आप आगे के अध्याय में पढ़ेंगे। वायुमंडल वातावरण की एक ऐसी स्थिति प्रदान करता है जिसमें सभी प्रकार का जीवन उत्पन्न होता है तथा वह उन्हें जीवित रखता है। पृथ्वी की गुरुत्वाकर्षण शक्ति वायुमंडल को पृथ्वी के चारों ओर खींचे रखती है। वायुमंडल हमें तीव्र ताप तथा पराबैंगनी विकिरण से बचाता है।

स्थलमंडल पृथ्वी की वह परत है जो शैलीय पदार्थों द्वारा निर्मित है और महाद्वीपों तथा महासागरों की द्रोणियों (अधस्तल) तक में विस्तृत है। स्थलमंडल की औसत मोटाई लगभग 100 किलोमीटर है।

पृथ्वी के चारों परिमंडल

स्थलमंडल, सिलिका तथा ऐलुमिनियम शैलों से समृद्ध **सियाल** नामक परत से बना होता है, जो महाद्वीपों पर पाई जाती है। महासागरीय अधस्तल में पाए जाने वाले शैल मुख्यतया सिलिका तथा मैगनीशियम युक्त होते हैं जिन्हें **सीमा** कहा जाता है। पृथ्वी का ऊपरी भाग अर्थात भू-पर्पटी अनेक प्रकार की शैलों द्वारा निर्मित होता है जिनके बारे में हम बाद में पढ़ेंगे।

स्थलमंडल वह मंडल है जो हमें रहने के लिए भूमि तथा पौधों के लिए मृदा प्रदान करता है और खनिज संपत्ति का स्रोत है।

जलमंडल पृथ्वी का वह भाग है जो जल द्वारा घिरा है। इस परिमंडल का निर्माण नदियों, झीलों, समुद्रों एवं महासागरों द्वारा होता है। जैसा कि हम पढ़ चुके हैं पृथ्वी की सतह का सत्तर प्रतिशत से अधिक भाग जल से ढका है। महासागरों में तैरते हुए महाद्वीप विस्तृत द्वीपों जैसे लगते हैं। दूसरी ओर, महासागर विभिन्न स्थलखंडों के बीच प्रमुख कड़ी जैसे हैं। जल, पृथ्वी पर पाए जाने वाले हर प्रकार के जीवन का आधार है और हमारे अस्तित्व के लिए आवश्यक है। इसके अतिरिक्त, तटीय भागों में जल का जलवायु पर समकारी प्रभाव पड़ता है। महासागर हमें भोजन एवं खनिज प्रदान करते हैं। समुद्री अधोतल में खनिज, तेल तथा गैस भी पाई जाती है।

जैवमंडल पृथ्वी का बहुत ही संकरा परिमंडल है जहाँ जीवन पाया जाता है। इस परिमंडल में वायुमंडल, जलमंडल तथा स्थलमंडल के भाग सम्मिलित हैं। अधिकांश जीवित प्राणी चाहे वे पौधे हों या जीव, पृथ्वी पर स्थल या जल की सतह पर पाए जाते हैं जो वायु से घिरी होती है। इस प्रकार हमारे ग्रह पर जैवमंडल बहुत ही संकरा क्षेत्र है, जहाँ जीवन पाया जाता है। क्या आप बता सकते हैं कि अधिकांश जीवन महासागरों की ऊपरी सतह के निकट ही क्यों केंद्रित होता है?

सौरमंडल में हमारी पृथ्वी ही केवल ऐसा ग्रह है जहाँ जीवन के लिए उपयुक्त परिस्थितियाँ हैं। कई सदियों में यहाँ जीवन विकसित हुआ और उसमें बहुरूपता आई है। इस बहुरूपता की प्रक्रिया से विभिन्न प्रजातियाँ विकसित हुई हैं। आज पाई जाने वाली प्रजातियों के विभिन्न प्रकारों को ही **जैविक-भिन्नता** कहते हैं।

मानव जैवमंडल का एक महत्त्वपूर्ण घटक है। वह अपने पर्यावरण की उपज है परंतु उसमें अपनी क्रियाओं द्वारा पर्यावरण को प्रभावित तथा परिवर्तित करने की क्षमता है। अब समय आ गया है जब हमें अपने पर्यावरण के साथ संतुलन बनाए हुए उसे और क्षति पहुँचाए बिना रहना सीखना होगा।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) पर्यावरण किसे कहते हैं?

   (ख) हम प्राकृतिक पर्यावरण का अध्ययन क्यों करते हैं?

   (ग) पर्यावरण के प्रमुख परिमंडल कौन से हैं?

   (घ) हम मानव प्राणी पर्यावरण को कैसे प्रभावित करते हैं?

2. **रिक्त स्थानों की पूर्ति कीजिए**

   (क) हम पर्यावरण को ______ परिमंडलों में विभाजित कर सकते हैं।

   (ख) सियाल परत ______ तथा ______ में समृद्ध शैलों द्वारा निर्मित होती है।

   (ग) जलमंडल पृथ्वी की वह सतह है जो ______ से घिरी होती है।

   (घ) जैवमंडल पृथ्वी के सभी ______ को धारण करने वाला मंडल है।

परियोजना कार्य

पृथ्वी का एक आरेख बनाकर उसमें विभिन्न परिमंडलों को दर्शाइए।

अध्याय 2

पृथ्वी का बदलता स्वरूप : प्रक्रियाएँ

पृथ्वी के सतह पर निरंतर परिवर्तन होते रहते हैं। इन परिवर्तनों के लिए प्रकृति तथा मनुष्य दोनों उत्तरदायी हैं। कभी-कभी ये परिवर्तन भू-पृष्ठ के नीचे भूकंप अथवा ज्वालामुखीय क्रिया के कारण शैलों के संसारों में वलन या भ्रंशन पड़ने से होते हैं। दूसरी ओर परिवर्तन धीरे-धीरे अपक्षय, अपरदन तथा मानवीय क्रियाओं द्वारा भी होते हैं।

अपक्षय, अपरदन तथा निक्षेपण जैसी क्रियाएँ धरातल का रूप बदलने में महत्त्वपूर्ण भूमिका निभाती हैं। अवसादी शैलों के निर्माण में उनका अत्यधिक प्रभाव होता है। यह जानना रुचिकर होगा कि जलवायु इन कारकों को भी प्रभावित करती है। इसी प्रकार जल, पौधे तथा पशु एक विशेष क्षेत्र में अपक्षय और अपरदन की गति तथा उसके प्रारूप को प्रभावित करते हैं।

बाह्य प्रक्रियाएँ

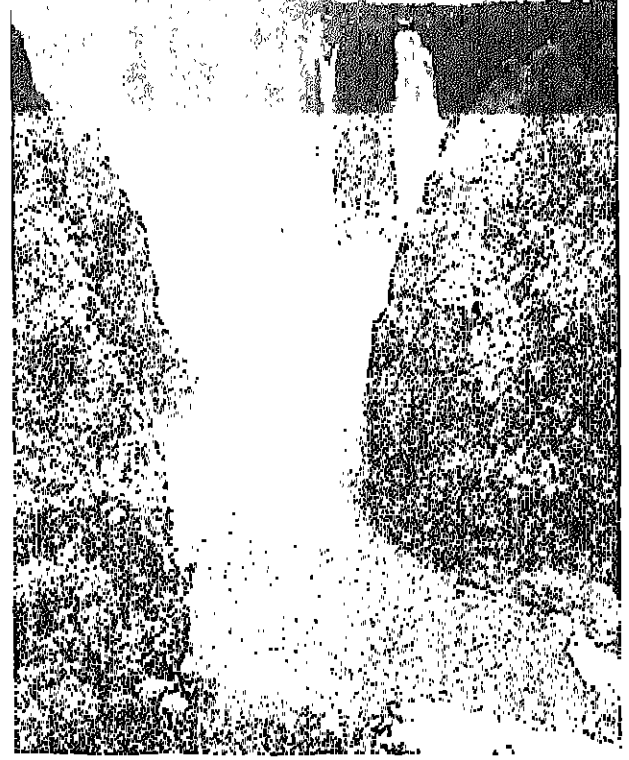
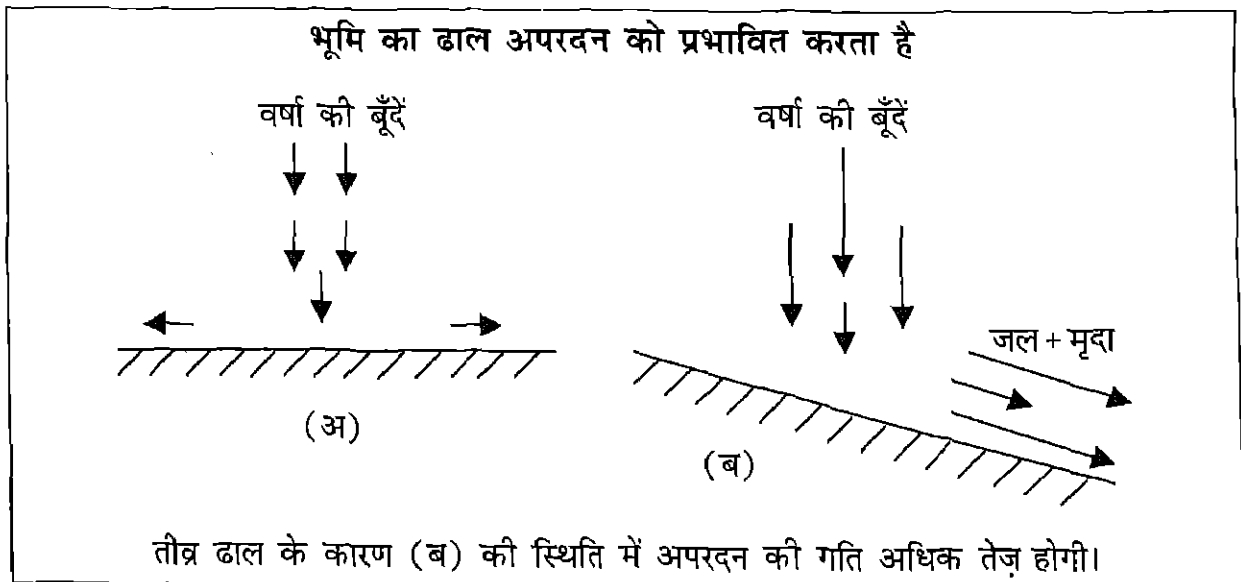
अपक्षय, अपरदन तथा निक्षेपण बाह्य प्रक्रियाएँ कहलाती हैं क्योंकि ये धरातल के ऊपर होने वाले परिवर्तनों के लिए उत्तरदायी हैं। **अपक्षय** उन सभी प्रक्रियाओं को कहते हैं जिनसे शैल टूट-फूट कर छोटे-छोटे कणों में विभक्त हो जाती हैं। आपने शायद यह देखा होगा कि किसी भवन की चिकनी तथा नई सतह की मिट्टी या कंकरीट की बाहरी परत के बहने या टूटने के बाद वह खुरदरी या दरारों वाली हो जाती है। यदि किसी भवन की दीवार पर या उसके नीचे के भाग पर पौधों की जड़ें फैलने लगती हैं तो उसमें बड़ी-बड़ी दरारें बन जाती हैं। यह प्रक्रियाएँ वैसी ही हैं जैसी शैलों में अपक्षय की प्रक्रियाएँ होती हैं।

मलबा : अपक्षय एवं अपरदन का प्रभाव

जब शैलें अपक्षय द्वारा एक बार टूट जाती हैं, तब जल, गतिशील हिम, पवन या गुरुत्वाकर्षण इन छोटे-छोटे कणों को एक स्थान से हटा कर दूसरे स्थान पर एकत्र कर देते हैं। इस प्रक्रिया को **अपरदन** कहते हैं।

जैसे ही पृथ्वी का कोई नया क्षेत्र लावे के जमने, हिमानी के पीछे खिसकने या समुद्र तल के नीचे हो जाने के कारण अनावृत होता है, तब अपक्षय की प्रक्रिया प्रारंभ हो जाती है। परंतु यह स्मरण रखना चाहिए कि अपक्षय तथा अपरदन की प्रक्रियाएँ सर्वत्र तथा सदैव होती रहती हैं। कभी-कभी एक प्रक्रिया दूसरे से अधिक स्पष्ट होती है। जलवायु अथवा पर्यावरण में परिवर्तन के कारण उनकी क्रिया की गति में अंतर हो सकता है।

अपक्षय तथा अपरदन की गति इन कारकों पर निर्भर होती है —

- किसी स्थान का तापमान एवं वर्षा
- वनस्पति आवरण

जलप्रपात

क्या आप जानते हैं?

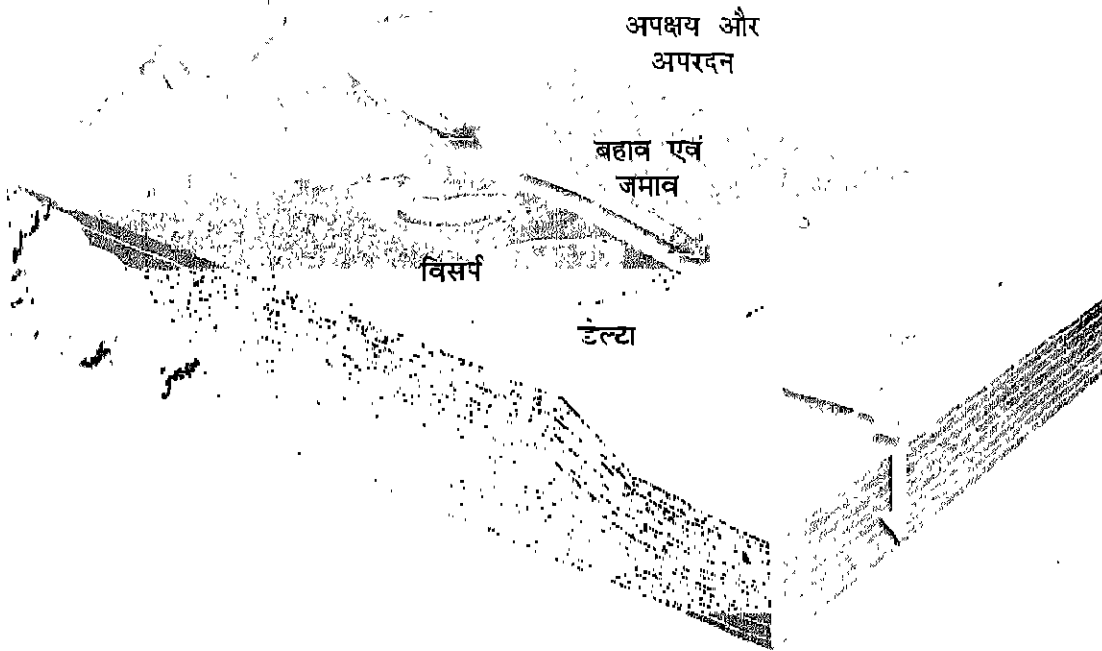
नगरों के विकास तथा अपरदन में बहुत गहरा संबंध है। कस्बों और नगरों का जैसे-जैसे विकास होता है, भवनों या सड़कों के निर्माण के लिए ज़मीन से वनस्पति साफ़ कर दी जाती है। इन मानवीय क्रियाओं से अपरदन की गति बढ़ जाती है। इससे मृदा की स्थिति भी परिवर्तित हो जाती है।

- भूमि-उपयोग में परिवर्तन
- मृदा के प्रकार
- भूमि का ढाल ।

लाखों करोड़ों वर्षों में हो रहे अपक्षय तथा अपरदन पृथ्वी की सतह पर पाई जाने वाली भू-आकृतियों जैसे पर्वतों, पहाड़ियों, पठारों तथा मैदानों का रूप परिवर्तित करते रहते हैं। यदि अपक्षय तथा अपरदन जैसी प्रक्रियाएँ न होतीं तो पृथ्वी बहुत भिन्न होती। ये दोनों शक्तियाँ बहुत लंबे समय से मिलकर कार्य कर रही हैं। अपक्षय तथा अपरदन की प्रक्रियाओं को **अनाच्छादन** कहते हैं।

यदि शैलों के अपक्षयित कण काफ़ी समय तक अनावृत रहते हैं तो उनमें रासायनिक एवं जैविक परिवर्तन भी होते रहते हैं। ये परिवर्तन मिलकर **मृदा** का निर्माण करते हैं। हम जानते हैं कि मृदा पौधों के विकास के लिए बहुत महत्त्वपूर्ण है। जिन शैलों से मृदा बनती है उनसे खनिज मिलते हैं। साथ ही इसमें सड़ी-गली पत्तियाँ, फूल, जीव-जंतुओं के अवशेष, जीवाणु तथा केंचुए भी मिलते हैं। मृदा का निर्माण उन क्षेत्रों में पाई जाने वाली जलवायु, शैलों के प्रकार, क्षेत्र की वनस्पति तथा भूमि की ढाल पर निर्भर करता है।

अनाच्छादन के कारक

अनाच्छादन के कारकों में सबसे अधिक प्रभावशाली कारक **बहता हुआ जल** है। बहता हुआ जल या सरिताएँ तेज़ गति से शैलों को तोड़ती हैं तथा बहाकर ले जाती हैं। नदियाँ

अवसादी शैल तथा शैल-चक्र

पठारों या पर्वतीय क्षेत्रों से निकलती हैं तथा मैदानों में बहती हुई वे अंततः समुद्रों तक पहुँचती हैं। पर्वतीय या पहाड़ी क्षेत्रों में तेज़ ढाल के कारण नदियाँ तीव्र शक्ति के साथ नीचे बहकर आती हैं। अधिकतम अपरदन या कटाव इसी भाग में होता है। जब ये नदियाँ मैदानी क्षेत्रों में पहुँचती हैं, वहाँ ढाल कम होती है। इसलिए नदी अपनी तलहटी या घाटी के किनारों पर पदार्थों को जमा करने लगती है। समुद्र के निकट बहुत ही कम ढाल के कारण नदी का अपने साथ अपरदित पदार्थों या अवसादों को आगे बहा ले जाना कठिन हो जाता है और वह उन्हें वहीं जमा कर देती है। नदी के मुहाने के निकट जलोढ़ मिट्टी या जलोढ़क के जमाव से **डेल्टा** बन जाता है। डेल्टा जलोढ़क से बना लगभग त्रिभुजाकार भू-भाग होता है। यूनानी भाषा के अक्षर डेल्टा की आकृति त्रिभुज (Δ) जैसी होती है। इसलिए इसे यह नाम दिया गया है। संसार का सबसे बड़ा डेल्टा गंगा तथा ब्रह्मपुत्र नदियों के मुहाने पर स्थित है। प्रायद्वीपीय भारत के पूर्व की ओर बहने वाली सभी नदियाँ अपने मुहानों पर डेल्टा बनाती हैं। आप यह जानकारी एकत्र कर सकते हैं कि प्रायद्वीपीय भारत की पश्चिम की ओर बहने वाली नदियों में डेल्टा क्यों नहीं बनता।

अनेक वर्ष पूर्व, ऐतिहासिक अतीत में पृथ्वी के विभिन्न भाग **हिमनदों** या हिमनदियों या हिमानियों के द्वारा ढके थे। हिमनदी बर्फ़ की नदी होती है। जो पहाड़ी ढालों पर नीचे की ओर बहुत धीरे-धीरे गतिशील होती है। हिमनद अधिक ऊँचाई वाले क्षेत्रों में तथा उच्च अक्षांशों में पाए जाते हैं, जहाँ तापमान बहुत कम होते हैं। किसी क्षेत्र का एक बड़ा भाग जो बर्फ़ से ढका रहता है उसे **महाद्वीपीय हिमनद** कहते हैं। ये ध्रुवीय क्षेत्रों में पाए जाते हैं। अंटार्कटिका मोटी बर्फ़ से ढका हुआ है। यूरोप, एशिया तथा उत्तरी अमेरिका के उत्तरी भागों में महाद्वीपीय हिमनद पाए जाते हैं।

पर्वतीय हिमनद हिमालय या **ऐल्प** जैसे ऊँचे पर्वतों पर पाए जाते हैं। जब हिमनद खिसकता है तब यह बुलडोज़र की तरह कार्य करता है और अपने नीचे शैलों को रगड़ता तथा उखाड़ता हुआ चलता है।

अनाच्छादन का एक अन्य कारक **पवन** है। पवन शैलों के छोटे-छोटे कणों को उड़ा ले जाती है। मरुस्थलीय क्षेत्रों में पवनों द्वारा

पर्वतीय हिमनद

समुद्र-तट

उड़ाकर लाए जाने वाले पदार्थ जब जमा होते हैं, तो इन ढेरों को बालू या बालू का टिब्बा कहते हैं। पवन का कार्य मरुस्थलों तथा तटीय क्षेत्रों में अधिक गहन होता है।

समुद्री लहरें तट रेखाओं के साथ-साथ स्थलाकृतियाँ बनाती हैं। तटीय क्षेत्रों में **लहरें** शैलों से टकराकर उन्हें छोटे-छोटे टुकड़ों में तोड़ती रहती हैं। ये छोटे-छोटे टुकड़े अथवा कण तटीय भागों में जमा हो जाते हैं या लहरों द्वारा बहाकर समुद्र की तलहटी में ले जाए जाते हैं।

स्थलाकृतियों के अपरदन से बने छोटे-छोटे कण शैलों की परतों के रूप में समुद्र की तलहटी में जमा होते रहते हैं। पृथ्वी के भीतर कार्य करने वाली शक्तियाँ जब इन परतों को ऊपर उठाती हैं तो ये पर्वत बन जाती हैं। इन नवीन पर्वतों में अपक्षय तथा अपरदन द्वारा विविध आकार बनने लगते हैं और समय बीतने पर ये प्रौढ़ अथवा प्राचीन पर्वत बन जाते हैं। इस प्रकार अपरदन-चक्र चलता रहता है। किसी समय तथा स्थान विशेष पर धरातल की आकृति, वहाँ होने वाली निर्माण या उभार की शक्तियों तथा उन्हें काटने या अपरदन द्वारा नीचा करने वाली शक्तियों के बीच संघर्ष की अवस्था होती है।

धरातल के रूप परिवर्तित करने में हम मनुष्यों का भी महत्त्वपूर्ण योगदान होता है। कई बार विभिन्न प्रक्रियाओं तथा परिणामों से अपरिचित मनुष्य स्थलाकृतियों में परिवर्तन कर देते हैं। इसके परिणामस्वरूप अवांछित घटनाएँ होती हैं। नाभिकीय (आणविक) प्रयोग अथवा विशाल बाँधों का निर्माण कुछ ऐसी प्रक्रियाओं के उदाहरण हैं जिन्होंने विनाश का तांडव रचा है। अधिक-से-अधिक भूमि को खेती के अंतर्गत लाने के उत्साह में हम वनों को काटते हैं और चरागाहों को नष्ट कर देते हैं। ऐसा करके हम प्रकृति तथा अपने पर्यावरण के पारिस्थितिक संतुलन को बिगाड़ रहे हैं। सड़कों का निर्माण और नगरों तथा उद्योगों की वृद्धि पर्यावरण को असंतुलित करती है।

मृदा

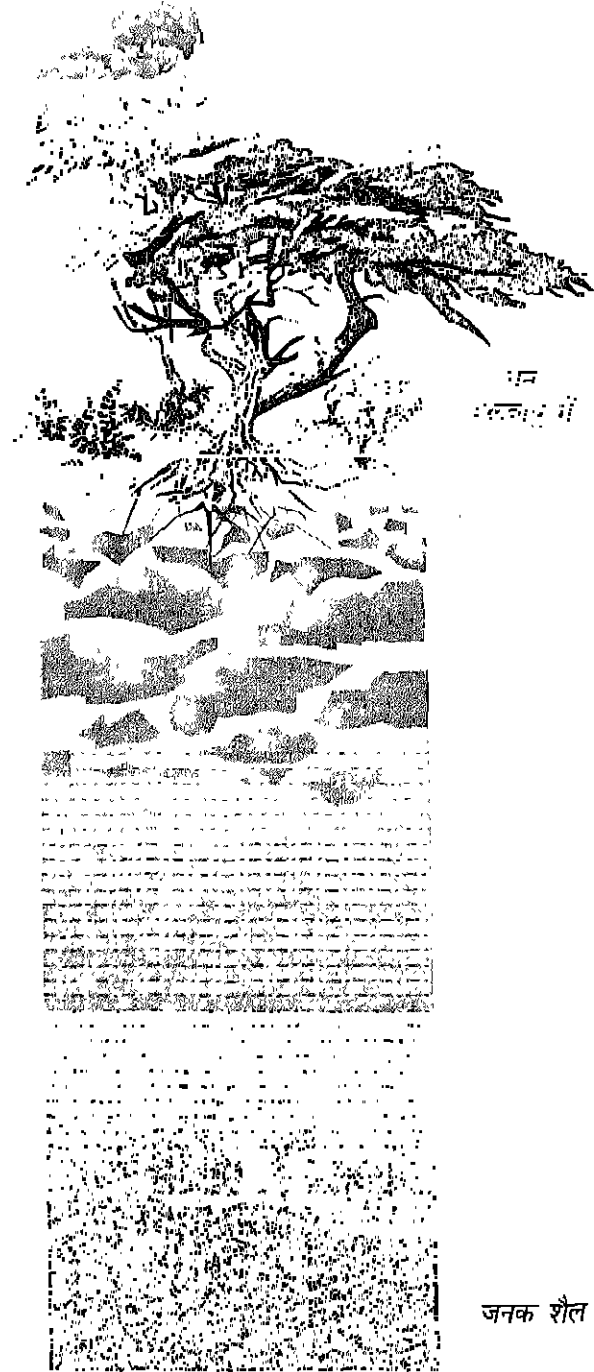
धरातल छोटे और असंगठित कणों वाली एक परत से ढका हुआ है जिसे मिट्टी या **मृदा** कहते

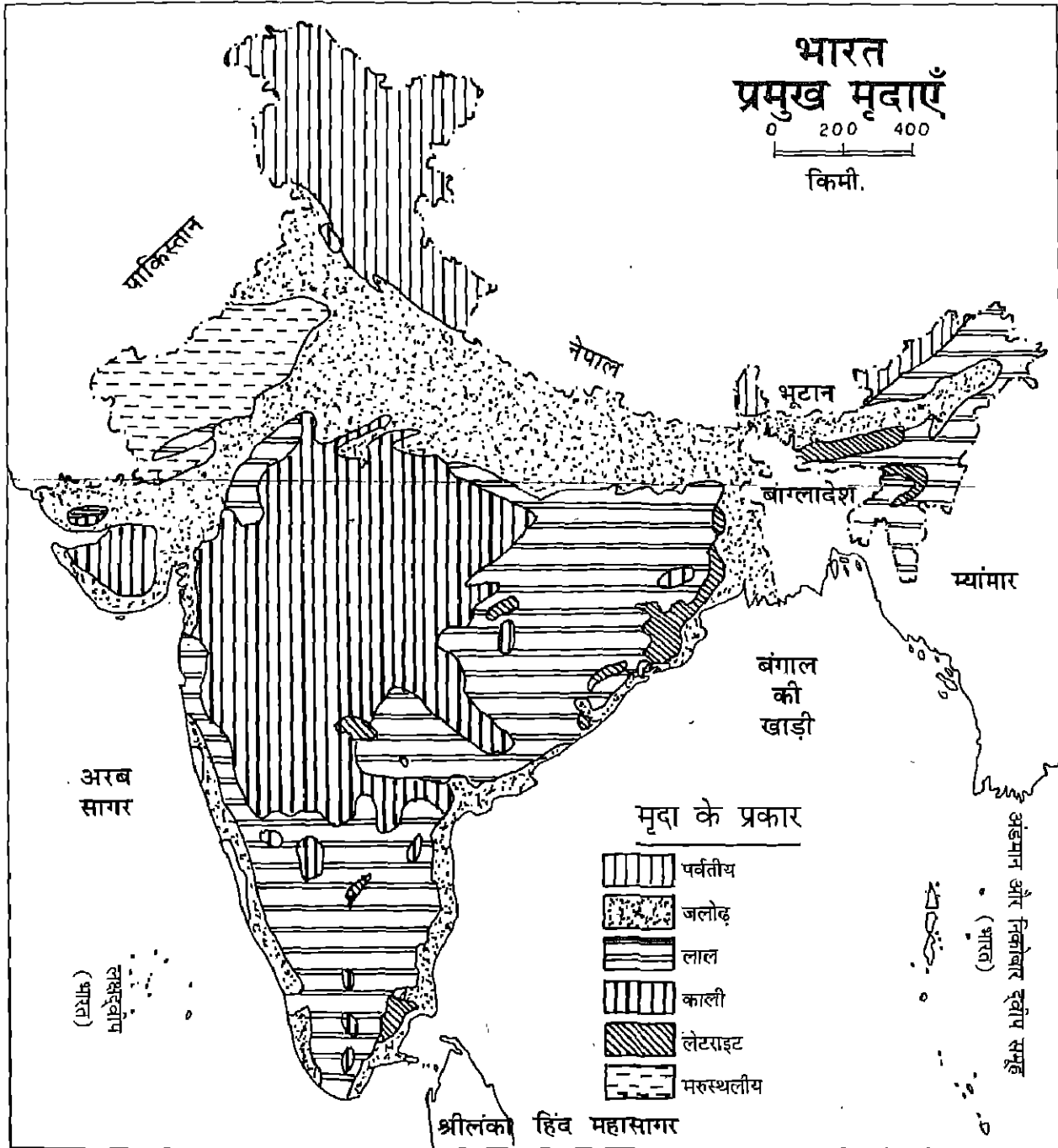
मानवीय क्रियाओं द्वारा बनने वाली स्थलाकृतियाँ

स्थलाकृतियाँ	**कारण**
गड्ढा	खनन
टीला	खनन
नालियाँ, वेदिका, पहाड़ियाँ	कृषि
बाँध और तटबंध	यातायात, नदियाँ, तटीय प्रबंधन
विवर	युद्ध
नहरें	यातायात तथा सिंचाई
खाई	सुरक्षा
धँसान/गर्त	खनन तथा जल निकासन

हैं। मृदा किसी भी प्रकार की वनस्पति के उगने के लिए आवश्यक है। यह अनेक प्रकार के कणों का मिश्रण होती है। इन कणों को दो वर्गों में बाँट सकते हैं — **जैविक** तथा **अजैविक**। जैविक का अर्थ है जीवों के अंश। मृदा में अधिकांश जैविक पदार्थ, पौधों या पादपों से आता है। कुछ जैविक पदार्थ जीव-जंतुओं के अवशेषों तथा जीवाणुओं से प्राप्त होते हैं। समय के साथ यही जैविक पदार्थ जीवाणविक की क्रिया से गहरे रंग के पदार्थ अर्थात **ह्यूमस** में बदल जाता है। पादपों के विकास के लिए आवश्यक पोषक तत्त्वों का प्रभाव स्रोत ह्यूमस है। ह्यूमस का अनुपात मृदा की उर्वरता निर्धारित करता है। दलदली तथा आर्द्र मैदानों की मृदा में ह्यूमस अधिक होता है। परंतु मरुस्थलों की मृदा में ह्यूमस की मात्रा कम होती है और यह कम उपजाऊ होती है।

अजैविक कणों में अपक्षयित शैलों के छोटे-छोटे टुकड़े होते हैं। वे भिन्न-भिन्न आकार के होते हैं, बड़े आकार वालों को बजरी तथा छोटे आकार वालों को बालू कहते हैं। गाद या मृत्तिका तथा धूल में और भी छोटे कण होते हैं, जो सूख जाने पर आटे या धूल जैसे चूर्ण के रूप में होते हैं।

मृदा कैसे बनती है? मृदा का निर्माण एक बहुत धीमी प्रक्रिया है। जैसे ही कोई शैल वायु या जल के संपर्क में आती है, यह प्रक्रिया प्रारंभ हो जाती है। शैलों के बड़े भाग अपक्षीण या अपक्षयित होते हैं। यह अपक्षीण पदार्थ वायु या जल द्वारा अपने मूल स्थान से हटाकर किसी अन्य स्थान पर निक्षेपित कर दिया जाता है। इस प्रकार बनी मृदा को **वाहित मृदा** कहते हैं। इसके विपरीत **अवशिष्ट मृदा** वह पदार्थ है जो अपने मूल स्थान पर ही मृदा के रूप में बदल जाता है।

मृदा निर्माण

जैसे-जैसे समय बीतता है और अपक्षय होता रहता है, मृदा निर्माण की प्रक्रिया भी चलती रहती है। कालांतर में मृदा परतों के

भारत का मृदा मानचित्र

रूप में विकसित होती है। इन क्षैतिज परतों को **मृदा संस्तर** कहते हैं। जिन शैलों से मृदा बनती है उन्हें **जनक शैल** कहते हैं।

संसार में अनेक प्रकार की मृदा पाई जाती है। मृदा के विभिन्न प्रकारों के विकास में जनक या मूल शैलें, जलवायु, भूमि की ढाल तथा

वनस्पति आवरण आदि प्रमुख कारक उत्तरदायी होते हैं।

भारत में मृदा के चार मुख्य प्रकार हैं — जलोढ़ मृदा, रेगड़ या काली मृदा, लाल मृदा तथा लेटराइट मृदा। जलोढ़ मृदा मुख्यत: नदियों की घाटियों तथा तटीय मैदानों तक सीमित है। यह मृदा बहुत उपजाऊ है और कृषि के विकास में इसका बहुत योगदान है। दक्कन के लावा क्षेत्र में काली मृदा मिलती है। आप उन राज्यों का पता लगाइए, जहाँ यह मृदा पाई जाती है। लाल मृदा का रंग लोहे की उपस्थिति के कारण लाल होता है। यह मृदा प्रायद्वीप के पठारी क्षेत्र में पाई जाती है। पठार के ऊँचे क्षेत्रों में लेटराइट मृदा मिलती है। इन चार प्रकार की मृदाओं के अतिरिक्त, पर्वतीय मृदा तथा मरुस्थलीय मृदा भारत के पर्वतीय तथा मरुस्थलीय क्षेत्रों में पाई जाती है। आप अपने क्षेत्र की मृदा के प्रकार जानने का प्रयास कर सकते हैं।

मृदा अपरदन केवल भारत में ही नहीं अपितु संसार के अन्य भागों में भी एक गंभीर समस्या है। अवैज्ञानिक ढंग से खेती, पेड़ों को काटना तथा चरागाहों में अत्यधिक पशुचारण मृदा अपरदन के मुख्य कारण हैं। भारत में मृदा अपरदन की गति बहुत तीव्र है। अत: इस संसाधन को और अधिक क्षति से बचाने के लिए मृदा-प्रबंधन अत्यंत आवश्यक है। वृक्षारोपण, उपयुक्त कृषि-विधियों तथा नियंत्रित पशुचारण द्वारा मृदा अपरदन को रोका जा सकता है।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) धरती के स्वरूप को परिवर्तित करने वाली प्रक्रियाओं के नाम लिखिए।
   (ख) बाह्य प्रक्रियाओं का क्या अर्थ है?
   (ग) अपरदन कैसे होता है?
   (घ) कौन से कारक अपक्षय तथा अपरदन की गति को प्रभावित करते हैं?
   (ङ) मृदा कैसे बनती है?

2. **निम्नलिखित स्तंभों को मिलाकर सही जोड़े बनाइए**

(क) बहता जल	(अ) बालू टिब्बा
(ख) पवन	(ब) डेल्टा
(ग) तटबंध	(स) जनक शैल
(घ) मृदा	(द) सिंचाई

3. **परियोजना कार्य**

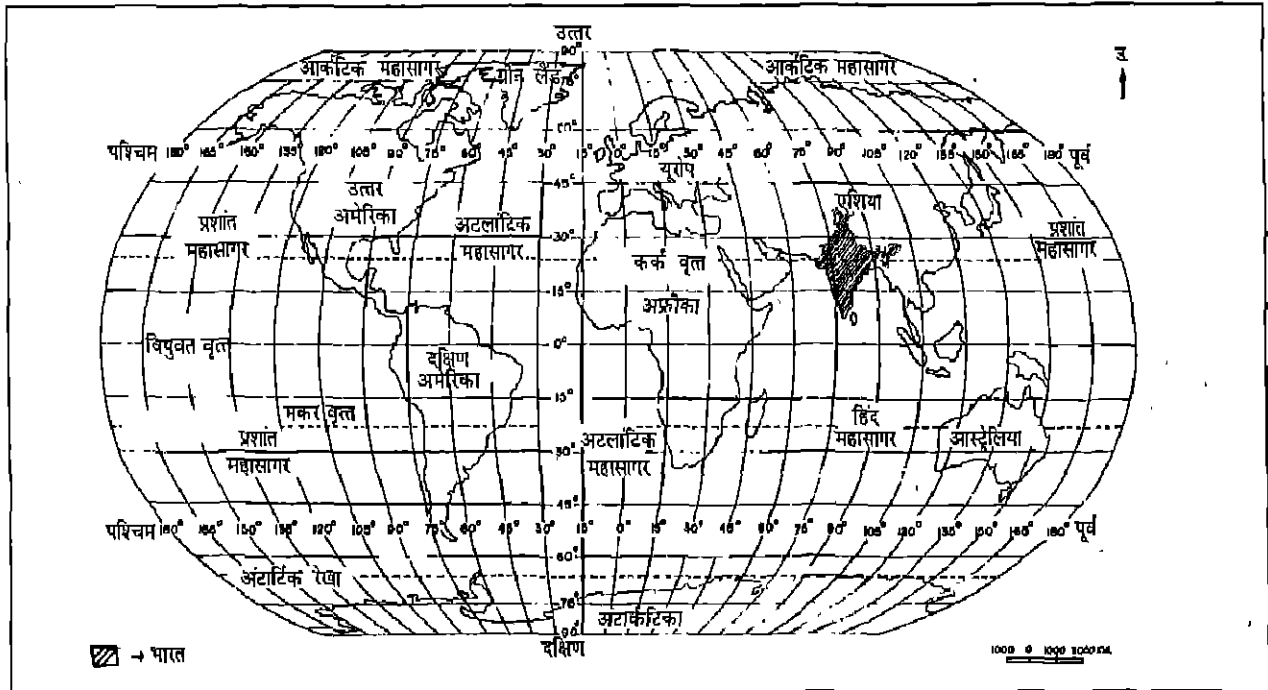
   - भारत के मृदा मानचित्र का अध्ययन कीजिए और वे राज्य ज्ञात कीजिए जहाँ जलोढ़ मृदा के विस्तृत क्षेत्र हैं।

अध्याय 3

पृथ्वी की सतह तथा आंतरिक संरचना

हमने अपनी पहले की कक्षाओं में पढ़ा है कि लगभग 400 करोड़ वर्ष पूर्व पृथ्वी कैसे बनी थी। परंतु अपनी उत्पत्ति के बाद से ही पृथ्वी तथा अन्य ग्रह परिवर्तित होते रहे हैं। इस ब्रह्मांड में कुछ भी स्थाई नहीं है। इस अध्याय में हम पृथ्वी की सतह या धरातल के स्वरूप तथा इसकी आंतरिक संरचना का ज्ञान प्राप्त करेंगे।

पृथ्वी की सतह या धरातल

पृथ्वी के धरातल का एक तिहाई से कम (29 प्रतिशत) भाग स्थल द्वारा तथा अधिकांश (71 प्रतिशत) भाग जल द्वारा घिरा हुआ है। अकेले प्रशांत महासागर का क्षेत्रफल (16 करोड़ वर्ग किलोमीटर) ही सारे महाद्वीपों तथा द्वीपों के सम्मिलित क्षेत्र से अधिक है। स्थल

महाद्वीपों एवं महासागरों का वितरण

तथा जल का यह वितरण दो प्रकार से प्रभावित होता है :

- जलवायु परिवर्तन
- विवर्तनिक क्रियाएँ

आप दिए गए रेखाचित्र में देख सकते हैं कि पृथ्वी पर स्थल तथा जल का वितरण समान नहीं है। ज्ञात कीजिए किस गोलार्द्ध में स्थल भाग और किस में जल भाग अधिक है।

इस स्थल तथा जल के वितरण का विश्व के जलवायु प्रतिरूपों पर प्रमुख प्रभाव होता है, जिसके बारे में हम बाद में पढ़ेंगे। आपको ज्ञात होना चाहिए कि महासागर वर्षण' के लिए आवश्यक आर्द्रता के मुख्य स्रोत हैं। वे हमारी ऊष्मा के भी भंडार हैं क्योंकि स्थल अपेक्षाकृत शीघ्र गरम तथा शीघ्र ठंडा हो जाता है। स्थल और जल का वितरण विश्व के प्रदूषण प्रारूप को भी प्रभावित करता है।

तटरेखाओं द्वारा निर्धारित महाद्वीपों तथा महासागरों की सीमाएँ विश्व को विभिन्न भागों में विभाजित करने के लिए सरल प्राकृतिक साधन हैं।

क्या आप जानते हैं?

पृथ्वी का उच्चतम बिंदु हिमालय में स्थित माऊंट एवरेस्ट है जो समुद्र-तल से 8848 मीटर ऊँचा है। पृथ्वी का निम्नतम बिंदु प्रशांत महासागर में स्थित मरियाना खाई समुद्र-तल से 11034 मीटर नीचे है।

पृथ्वी के इन दोनों चरम बिंदुओं के बीच कुल कितना अंतर (मीटर में) है?

क्या आप जानते हैं?

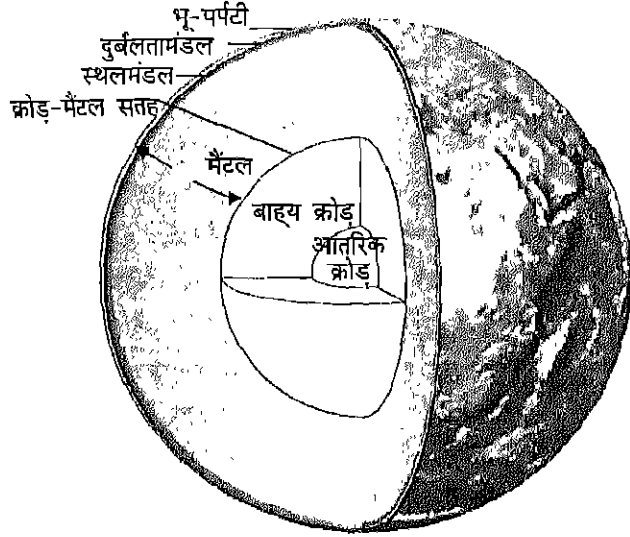
यदि पृथ्वी का कुल क्षेत्रफल संसार की कुल जनसंख्या में समान रूप से बाँटा जाए तो हर व्यक्ति को लगभग 50 वर्ग मीटर का क्षेत्र मिलेगा। जनसंख्या का समान वितरण होने पर घनत्व लगभग 43 व्यक्ति प्रति वर्ग किलोमीटर होगा। परंतु वास्तव में ऐसा नहीं है। कुछ क्षेत्रों में जनसंख्या का घनत्व बहुत अधिक है, जबकि कुछ में बहुत कम है। सबसे अधिक घनी जनसंख्या तथा सबसे विरल जनसंख्या वाले (क) महाद्वीप (ख) देश तथा (ग) भारत के राज्य ज्ञात कीजिए।

यह वास्तव में पृथ्वी का चेहरा है जैसा कि वह अंतरिक्ष से दिखाई देता है। यह प्राकृतिक विभाजन हमारे पर्यावरण के प्रबंधन के कुछ महत्त्वपूर्ण पक्षों के लिए सार्थक आधार प्रदान करता है।

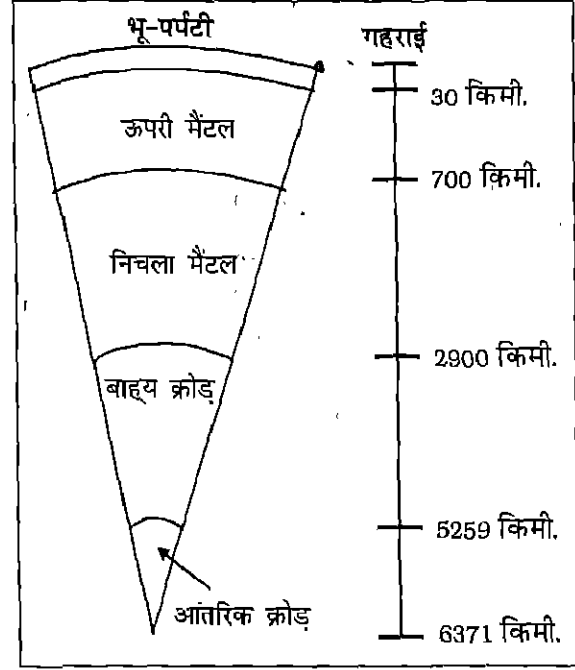
उच्चावच

हमारी पृथ्वी के धरातल पर विविध प्रकार के स्थलरूप पाए जाते हैं। यहाँ ऊँचे पर्वत तथा गहरी घाटियाँ, विस्तृत मैदान तथा उच्चभूमि या पठार फैले हुए हैं। इन स्थलरूपों या भू-आकृतियों की विविधता ने इस ग्रह (पृथ्वी) पर लोगों के फैलाव एवं उनकी गतिविधियों को प्रभावित किया है। पृथ्वी के धरातल की ऊँचाइयों और नीचाइयों को सम्मिलित रूप में उच्चावच कहते हैं। इसे समुद्र-तल को आधार मान कर नापा जाता है। संसार के मानचित्र में प्रत्येक महाद्वीप का उच्चतम पर्वत शिखर अंकित कीजिए।

पृथ्वी की आंतरिक संरचना

आपको यह जानकर आश्चर्य होगा कि पृथ्वी की आंतरिक प्रक्रियाओं के बारे में हमारा अधिकांश ज्ञान अप्रत्यक्ष स्रोतों से प्राप्त होता

पृथ्वी का आंतरिक भाग

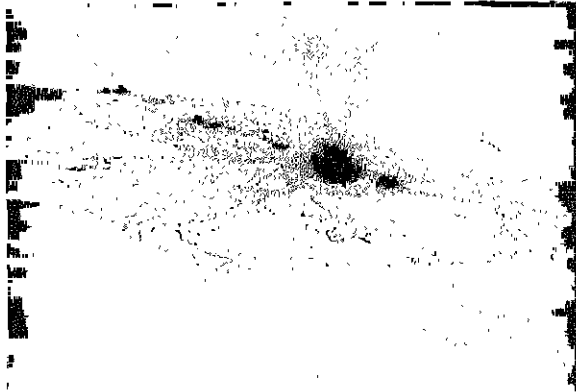
है। इसका सबसे महत्त्वपूर्ण स्रोत भूकंपीय तरंगें या **सीस्मिक तरंगें** हैं। ये तरंगें भूकंप के उद्गम केंद्र से उत्पन्न होती हैं। ये पृथ्वी के धरातल की ओर विभिन्न दिशाओं में चलती हैं। ये विभिन्न गतियों में चलती हैं। इनकी गति उन पदार्थों की प्रकृति पर निर्भर होती है जिनसे होकर ये गुज़रती हैं। सीस्मिक तरंगें दो प्रकार की होती हैं — 'पी.' तरंगें (प्राथमिक तरंगें) तथा 'एस.' तरंगें (गौण तरंगें)।

इन तरंगों के अध्ययन ने हमें पृथ्वी के अभ्यंतर (आंतरिक भाग) के बारे में ज्ञान दिया है। एक पतली ठोस परत पृथ्वी को बाहर से घेरे हुए है। इस परत को **भू-पर्पटी** कहते हैं। भू-पर्पटी की मोटाई विभिन्न स्थानों पर भिन्न-भिन्न होती है। समुद्र की तलहटी का निर्माण करने वाली भू-पर्पटी प्रायः 4 से 7 किलोमीटर मोटी होती है जबकि महाद्वीपों की भू-पर्पटी औसत रूप से 35 किलोमीटर मोटी होती है। कुछ पर्वतों के नीचे तो भू-पर्पटी 70 किलोमीटर तक मोटी है। शैलें और मृदा इस भू-पर्पटी की सबसे ऊपरी परत का निर्माण करती हैं।

पृथ्वी का आंतरिक भाग (रेखाचित्र)

भू-पर्पटी के नीचे एक बहुत अधिक मोटी परत पाई जाती है जिसे **मैंटल** कहते हैं। मैंटल 2900 किलोमीटर गहराई तक पाया जाता है। परंतु पूरा मैंटल सर्वत्र एक-सा नहीं है। मैंटल का ऊपरी 100 किलोमीटर तक का भाग **ऊपरी मैंटल** कहलाता है। 100 किलोमीटर से अधिक गहराई पर **निचला मैंटल** होता है।

पृथ्वी का सबसे भीतर वाला भाग **क्रोड़** कहलाता है। क्रोड़ का अर्धव्यास 3470 किलोमीटर है। इसे भी दो भागों मे बाँटा जाता है — बाह्य क्रोड़ तथा आंतरिक क्रोड़। लोहा तथा निकेल पृथ्वी के क्रोड़ का निर्माण करते हैं।

जब हम पृथ्वी की भू-पर्पटी को खनिजों के लिए खोदते हैं या खनिज तेल प्राप्त करने के लिए कुएँ खोदते हैं तो धरातल के निकट के भागों की अपेक्षा नीचे के भाग में शैलें अधिक गरम पाई जाती हैं।

फ्यूजियामा ज्वालामुखी – जापान

ज्वालामुखी लावा उगलते हुए – एक आकाशीय दृश्य

कभी आपने सोचा है कि पृथ्वी के भीतर की इस गर्मी का क्या होता है? ज्वालामुखी से निकलने वाले लावा की भाँति कभी-कभी पृथ्वी के भीतर से गर्म पदार्थ दरारों या संधियों से बाहर निकलता है। जब ऐसा पिघला हुआ पदार्थ समुद्र की तलहटी के नीचे से निकलता है, तब इससे समुद्री तलहटी बन जाती है। स्थलीय भागों पर लावे के जमाव से ज्वालामुखी पर्वत बन जाते हैं। जापान में फ्यूजियामा पर्वत इसका अच्छा उदाहरण है।

समुद्र की तलहटी के इस विस्तार से भू-पर्पटी अनेक बड़े भागों में टूट गई है। प्रत्येक भाग एक गतिशील प्लेट है। पृथ्वी की भू-पर्पटी ऐसी **सात** बहुत बड़ी प्लेटों तथा अनेक छोटी प्लेटों से मिलकर बनी है। अपने अध्यापक की सहायता से आप भू-गर्भीय प्लेटों का एक मानचित्र प्राप्त कर सकते हैं।

क्या आप जानते हैं?

हिमालय तथा एंडीज़ पर्वत प्लेटों के आपसी टकराव के कारण बने हैं। टकराव से एक प्लेट दूसरे के ऊपर चढ़ जाती है और प्लेटों के बीच का पदार्थ दबकर ऊपर की ओर मुड़कर पर्वत बन जाता है। भू-विज्ञानियों के अनुसार हिमालय तथा एंडीज़ का निर्माण इसी प्रकार हुआ है।

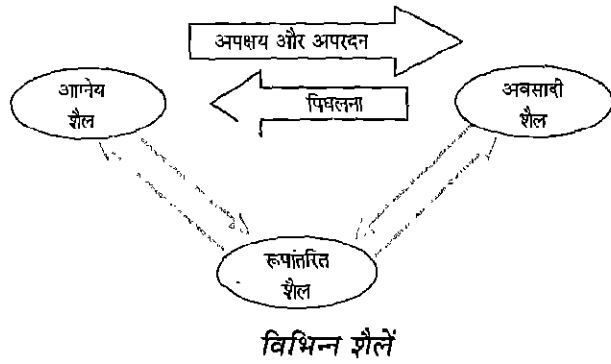
पृथ्वी के पदार्थ : खनिज तथा शैल

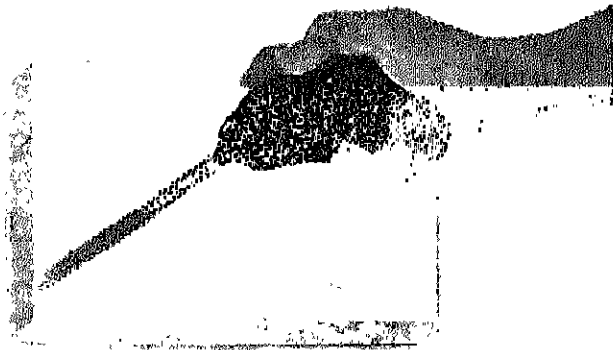
आप धरती को प्रतिदिन देखते हैं। धरातल को ध्यान से देखने पर आप शैल देख सकते हैं। ये शैलें विभिन्न रंगों तथा आकारों की होती हैं। जिन पदार्थों से यह शैलें बनती हैं उनके कुछ विशेष गुण होते हैं जिनके आधार पर उन्हें पहचाना जा सकता है। शैलों का निर्माण करने वाले ये पदार्थ ही **खनिज** हैं।

खनिजों की तुलना हम किसी भी पाकशाला की चीनी व नमक से कर सकते हैं। जैसे स्वाद से चीनी और नमक में अंतर किया जा सकता है वैसे ही गुणों के आधार पर खनिजों को पहचाना जा सकता है। अधिकांश खनिजों की संरचना रवेदार होती है।

पृथ्वी की भू-पर्पटी पर पाई जाने वाली शैलें भी सर्वत्र एक सी नहीं हैं क्योंकि एक शैल में एक विशेष प्रकार के खनिज समूह पाए जाते हैं। शैल का निर्माण करने वाले खनिजों की संख्या और आकार का अनुपात विभिन्न शैलों में भिन्न-भिन्न होता है। यदि सूक्ष्मदर्शी द्वारा आप एक शैल को देखें तो आप उसमें खनिजों को देख सकते हैं। साधारण नमक जिसे हम रोज़ प्रयोग करते हैं, वह भी

एक खनिज है। नमक का खनिजीय नाम 'हैलाइट' है। खनिजों को जाँचने के लिए उनको चखना सदैव उचित विधि नहीं है। खनिजों की जाँच करने में जो गुण उपयोगी हैं उनमें रंग, चमक, संरचना तथा कठोरता सम्मिलित हैं। स्फटिक (क्वार्ट्ज़) तथा हीरा भी खनिज हैं। सभी में हीरा सबसे कठोर खनिज है। आप

विभिन्न शैलें

कुछ अन्य खनिजों के नाम संकलित कर सकते हैं। खनिजों का आर्थिक महत्त्व होता है। अत: वे हमारे लिए बहुत उपयोगी हैं।

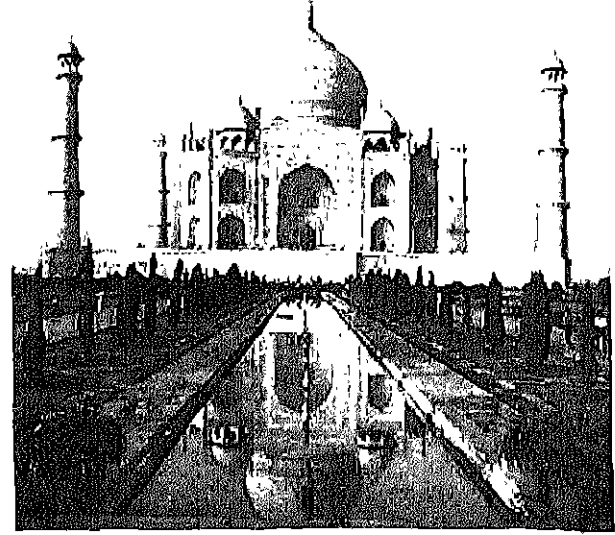
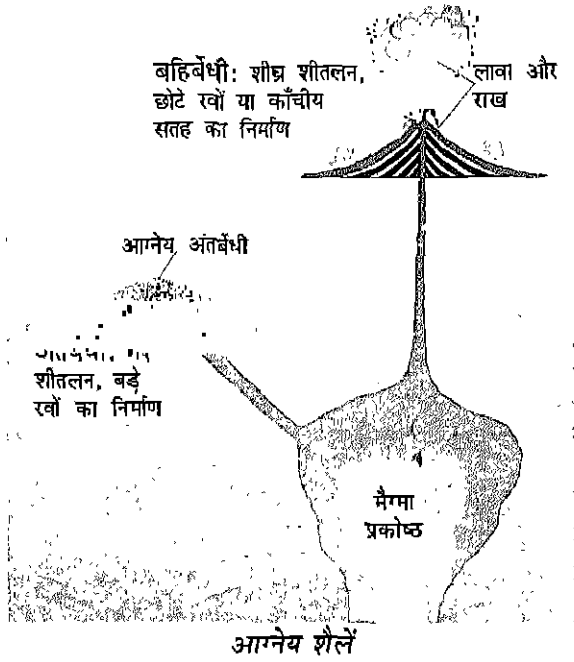
शैल, खनिजों के मिश्रण से बना ठोस पदार्थ है। ये विभिन्न आकृतियों, आकारों तथा रंगों में पाई जाती हैं। कुछ शैलें अधिक सघन होती हैं तथा कुछ अपेक्षाकृत अधिक कठोर। पृथ्वी की भू-पर्पटी में विविध प्रकार की शैलें पाई जाती हैं। भू-विज्ञानियों ने शैलों को उनके

हेमाटाईट — शैलों को पहचानने का तरीका

शैल

निर्माण के आधार पर तीन मुख्य वर्गों में विभक्त किया है — **आग्नेय, अवसादी** तथा **रूपांतरित शैलें।**

आग्नेय चट्टानों का निर्माण मैग्मा नामक पिघले पदार्थ के ठंडे होने और लावे के रूप में जम जाने से होता है। 'आग्नेय' का अर्थ है 'आग से निकलने वाला'। ठंडा होने तथा जमकर ठोस होने की क्रिया धरातल के नीचे तथा धरातल के ऊपर भी हो सकती है। आग्नेय शैलों को प्राय: प्राथमिक शैलें भी कहा जाता है क्योंकि अन्य सभी शैलें अंतत: आग्नेय शैलों से बनती हैं। ये पृथ्वी की भू-पर्पटी का विशाल भाग घेरे हुए हैं।

धरातल पर एक बार खुल जाने के बाद आग्नेय शैल टूटकर या ऋतुक्षय द्वारा गौण शैलों के लिए पदार्थ प्रदान करती हैं। अवसादी शैलें उस गौण समूह से संबंधित हैं। आग्नेय शैलों में जीवाश्म और परतें नहीं होतीं। उनकी संरचना रवेदार होती है।

धरातल के नीचे ठोस रूप धारण करने वाली आग्नेय शैल को अंतर्वेधी शैल कहा जाता है। ग्रेनाइट तथा ग्रैब्रो इस प्रकार की शैलों के उदाहरण हैं। जब आग्नेय शैल धरातल के ऊपर बनती हैं तब इन्हें बहिर्वेधी आग्नेय शैल

आग्नेय शैलें

ताजमहल - विश्व प्रसिद्ध सफ़ेद संगमरमर का स्मारक

कहते हैं। बेसाल्ट तथा रायोलाइट इनके सामान्य उदाहरण हैं।

अपने निर्माण के साथ ही आग्नेय शैल अपक्षय तथा पवन, बहते हुए जल, हिमानी या लहरों द्वारा अपरदन से प्रभावित होने लगती है। बहता हुआ जल अपरदन का प्रमुख कारक है। नदियाँ तथा सरिताएँ बहते समय अपने प्रवाह के साथ शैल के छोटे-छोटे टुकड़े बहाकर ले जाती हैं। खनिज भी जल में घुल जाते हैं। इन शैलों के टुकड़ों तथा घुले हुए खनिजों को **नदी का भार** कहते हैं जिन्हें नदियाँ अपनी तलहटी और घाटियों में निक्षेपित करती हैं। इन निक्षेपों को अवसाद कहते हैं। ये अवसाद धीरे-धीरे परतों के रूप में एकत्रित होते हैं। दबाव के कारण ये परतें दब कर एक-दूसरे पर जम जाती हैं जो अंततः शैल बन जाती हैं। इन परतदार शैलों को अवसादी शैल कहते हैं। बालुआ पत्थर, शेल, ग्रैवेल तथा कांग्लोमरेट सामान्य अवसादी शैलें हैं। कभी-कभी पशु तथा पादप या उनके अवशेष भी अवसादी शैलों की परतों में फँस जाते हैं। इन्हें **जीवाश्म** कहते हैं। कोयला, खनिज तेल तथा प्राकृतिक गैस जैविक मूल उत्पत्ति वाले होते हैं, अतः इन्हें जीवाश्मी ईंधन कहते हैं। ये धरातल के नीचे पाए जाते हैं जहाँ अवसादी शैलें होती हैं।

आधुनिक समाज ऊर्जा के प्रमुख साधन के रूप में जीवाश्मी ईंधन पर निर्भर करता है। इस जीवाश्मी ईंधन का दोहन तथा प्रयोग हमारे पर्यावरण को प्रभावित करता है। अतः यह विश्वव्यापी चिंता का विषय है।

दबाव तथा ताप के कारण आग्नेय तथा अवसादी शैलों के स्वरूप, गुणों तथा विशेषताओं में भी अंतर आ जाता है। परिवर्तन की इस प्रक्रिया को रूपांतरण कहते हैं। इस प्रक्रिया से निर्मित शैल को रूपांतरित शैल कहते हैं। इसका एक अच्छा उदाहरण ग्रेनाइट (आग्नेय)

का नाइस तथा चूने के पत्थर (अवसादी) का संगमरमर के रूप में रूपांतरण है। शुद्ध संगमरमर रंग में श्वेत होता है और भव्य भवनों के निर्माण के लिए इसकी बहुत माँग है। हमारे देश का ताजमहल इसका एक अच्छा उदाहरण है। भवनों के निर्माण में बलुआ के पत्थर तथा ग्रेनाइट का भी बहुत प्रयोग होता है।

आप यह समझ गए होंगे कि रूपांतरण वर्तमान शैलों के गुण और स्वरूप बदल देता है। रूपांतरित शैलें भी, आग्नेय तथा अवसादी शैलों की भाँति, अपक्षय तथा अपरदन के कारण परिवर्तित हो जाती हैं और अवसादी शैलों का निर्माण करती हैं। इसे **शैल-चक्र** कहते हैं।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) उच्चावच किसे कहते हैं?
   (ख) पृथ्वी के भीतरी भाग के बारे में हम कैसे जानते हैं?
   (ग) पृथ्वी के क्रोड़ के प्रमुख संघटकों के नाम बताइए।
   (घ) पृथ्वी की प्रमुख शैलों के नाम बताइए।

2. **निम्नलिखित स्तंभों को मिलाकर सही जोड़े बनाइए**

   (क) शैल — (अ) अनवरत प्रक्रिया जिससे शैलें निर्मित, विघटित तथा पुन: निर्मित होती हैं।
   (ख) अवसाद — (ब) दो या अधिक खनिजों द्वारा निर्मित ठोस पदार्थ।
   (ग) आग्नेय शैल — (स) जल में जमा होने वाले पदार्थ।
   (घ) शैल-चक्र — (द) पिघले पदार्थों के ठंडे होकर जमा होने से बनी शैल।

3. **रिक्त स्थानों की पूर्ति कीजिए**

   (क) पृथ्वी की सतह का लगभग __________भाग जल द्वारा ढका हुआ है।
   (ख) पृथ्वी के भीतरी भागों के बारे में जानने के लिए __________सबसे महत्त्वपूर्ण स्रोत है।
   (ग) पृथ्वी की सबसे ऊपरी परत को __________कहते हैं।
   (घ) जीवाश्म अवसादी शैलों की परतों में फँसे __________ तथा__________ के अवशेष हैं।

4. **परियोजना कार्य**

   - पृथ्वी का एक मॉडल बनाइए जिसमें पृथ्वी की मुख्य परतें प्रदर्शित हों।
   - कार्डबोर्ड के टुकड़ों को महाद्वीपों तथा महासागरों की आकृति में काटिए तथा उन्हें एक-दूसरे से मिलाने की चेष्टा कीजिए।

अध्याय 4

हमारे चारों ओर की वायु

क्या आपने कभी सोचा है कि यदि वायु न होती तो कैसी स्थिति होती? यदि वायु न होती तो पृथ्वी सौर परिवार के अन्य ग्रहों की भाँति बिना जीवन के होती, आकाश काला और बादलों से रहित होता। परंतु हमारा ग्रह गैसों की एक सुरक्षा वाली परत से घिरा हुआ है जिसे **वायुमंडल** कहते हैं। इन गैसों के बिना हमारी पृथ्वी भी अन्य ग्रहों की भाँति जीवन रहित होती।

वायुमंडल का संघटन

वायु, जिसमें हम साँस लेते हैं, कोई एक गैस नहीं बल्कि अनेक गैसों का मिश्रण है। यद्यपि वायु में मिलने वाली गैसों का अनुपात समय तथा स्थान के साथ बदलता रहता है, परंतु वायु के तीन मुख्य संघटक हैं – **नाइट्रोजन, ऑक्सीजन** तथा **कार्बन-डाइऑक्साइड**। वायु में कुछ मात्रा में **धूल** तथा **जलवाष्प** भी होते हैं।

पिछली कक्षा में हमने वायुमंडल की परतों के बारे में अध्ययन किया है। अब हम विस्तार से वायु के संघटन या रचना के बारे में जानेंगे। **नाइट्रोजन** वायु में सर्वाधिक पाई जाने वाली गैस है। यह वायु के पूरे आयतन का 78 प्रतिशत है। जब हम साँस लेते हैं तब फेफड़ों में कुछ नाइट्रोजन भी ले जाते हैं और फिर उसे बाहर निकाल देते हैं। परंतु पौधों को अपने जीवन के लिए नाइट्रोजन की आवश्यकता होती है। वे वायु से नाइट्रोजन सीधे नहीं ले पाते। मृदा तथा कुछ पौधों की जड़ों में रहने वाले जीवाणु वायु से नाइट्रोजन लेकर इसका स्वरूप बदल देते हैं, जिससे पौधे इसका प्रयोग कर सकें।

ऑक्सीजन वायु में प्रचुरता से मिलने वाली दूसरी गैस है। आयतन में यह वायु का 21 प्रतिशत भाग है। मनुष्य तथा पशु साँस लेने में वायु से ऑक्सीजन प्राप्त करते हैं। हरे पादप प्रकाश संश्लेषण द्वारा ऑक्सीजन उत्पन्न करते हैं। इस प्रकार वायु में ऑक्सीजन की मात्रा समान बनी रहती है। यदि हम वृक्ष काटते हैं तो यह संतुलन बिगड़ जाता है। अत: वृक्ष काटने से पहले हमें नए वृक्ष लगाने चाहिए।

वायु में कम आयतन में पाई जाने वाली गैसों में **आरगन, हीलियम, मीथेन** गैसें हैं। परंतु **कार्बन-डाइऑक्साइड**, जो वायु का केवल 0.03 प्रतिशत होती है, वायु का एक महत्त्वपूर्ण घटक है। हरे पादप अपने भोजन के रूप में कार्बन-डाइऑक्साइड का प्रयोग करते हैं और

ऑक्सीजन वापस देते हैं। मनुष्य और पशु कार्बन-डाइऑक्साइड बाहर निकालते हैं। मनुष्यों तथा पशुओं द्वारा बाहर निकालने वाली कार्बन-डाइऑक्साइड की मात्रा पादपों द्वारा प्रयोग की जाने वाली इस गैस के बराबर होती है, जिससे यह संतुलन बना रहता है। परंतु यह संतुलन कोयला तथा खनिज तेल आदि ईंधनों के जलानें से गड़बड़ हो जाता है। वे वायुमंडल में प्रतिवर्ष करोड़ों टन कार्बन-डाइऑक्साइड की बढ़ोत्तरी करते हैं। परिणामस्वरूप कार्बन-डाइऑक्साइड का बढ़ा हुआ आयतन पृथ्वी पर मौसम तथा जलवायु को प्रभावित करता है।

जलवाष्प वायु का एक अन्य घटक है जो जलवायु संबंधी परिवर्तनों में महत्त्वपूर्ण भूमिका अदा करता है।

क्या आप जानते हैं?

जब वायु गरम होती है तो फैलती है और हल्की होकर ऊपर जाती है।

ठंडी वायु सघन और भारी होती है। इसीलिए इसमें नीचे रहने की प्रवृत्ति होती है।

गरम वायु के ऊपर उठने पर आसपास के क्षेत्रों से ठंडी वायु रिक्त स्थान को भरने के लिए वहाँ आ जाती है। इस प्रकार वायु-चक्र चलता रहता है।

वायु का प्रदूषण

प्रतिवर्ष करोड़ों टन पदार्थ वायुमंडल में मिल जाते हैं जो प्राकृतिक संघटक नहीं होते। वायुमंडल के ये बाह्य पदार्थ **वायु प्रदूषक** कहलाते हैं। ये दो प्रकार के होते हैं — गैसीय एवं ठोस। धूल और जीवाणु ठोस प्रदूषक हैं। ज्वालामुखी भी प्राय: वायुमंडल में धूल प्रदूषण के महत्त्वपूर्ण स्रोत होते हैं। मानवीय क्रियाएँ भी, विशेषकर नगरों में वायु में भारी मात्रा में ठोस प्रदूषक ईंधन जलने से धुएँ के द्वारा, वायु में कार्बन के कण (कोयला) तथा अन्य ठोस प्रदूषक फैलाती हैं। उद्योगों की विभिन्न क्रियाओं द्वारा बड़े पैमाने पर ठोस प्रदूषक वायु में फैलते हैं। एस्बेस्टस खतरनाक प्रकार का ठोस प्रदूषण है।

गैसीय प्रदूषण का एक बहुत ही खतरनाक रूप मोटर गाड़ियों से निष्कासित पदार्थ है। यह अधिक यातायात वाले क्षेत्रों में वायु में कार्बन मोनो ऑक्साइड बढ़ाता है जो बहुत विषैली होती है। आजकल हम धूम-कोहरा या **स्मॉग** के बारे में प्राय: चर्चा करते हैं। यह वस्तुत: प्राकृतिक कोहरे तथा धुएँ का मिला रूप होता है, जिसके बारे में आपने समाचार-पत्रों में अवश्य पढ़ा होगा। धूम-कोहरा उन पदार्थों का मिश्रण है जिनसे स्वास्थ्य संबंधी गंभीर समस्याएँ उत्पन्न होती हैं। ओज़ोन स्तर का नीचा होना वायु प्रदूषण का एक प्रभाव है, जो बढ़ते हुए यातायात के साधनों तथा उद्योगों के कारण है। ग्रीष्म ऋतु में यह एक प्रमुख प्रदूषक है, विशेषकर बड़े नगरों तथा औद्योगिक क्षेत्रों में जहाँ बड़ी संख्या में लोग रहते हैं और काम करते हैं।

वायु प्रदूषकों के स्रोतों को नियंत्रित करने के लिए अनेक कानून बनाए गए हैं। परंतु इस

वायु प्रदूषण

संबंध में हमें स्वयं जागरूक होना चाहिए जिससे हम वायु प्रदूषण को रोक सकें।

वायुमंडलीय दाब तथा तापमान

हम पृथ्वी के वायुमंडल की निचली तह पर रहते हैं जहाँ ऊपर की वायु के भार के कारण दाब सर्वाधिक है। वायु दाब को एक यंत्र द्वारा नाप सकते हैं जिसे वायुदाबमापी या **बैरोमीटर** कहते हैं। ऊँचे पर्वतों पर जाने या वायुयान से यात्रा करने पर आपने ध्यान दिया होगा कि हमारे कानों में सनसनाहट होने लगती है क्योंकि यहाँ वायु का दाब कम हो जाता है। जैसे-जैसे कोई ऊँचाई पर जाता है वायुदाब कम होता जाता है। हम जैसे-जैसे ऊपर जाते हैं वायुदाब तथा तापमान दोनों ही कम होते जाते हैं। विभिन्न ऊँचाइयों पर तापमान में परिवर्तन होने के कारण वायुमंडल को कई परतों में बाँटा जाता है।

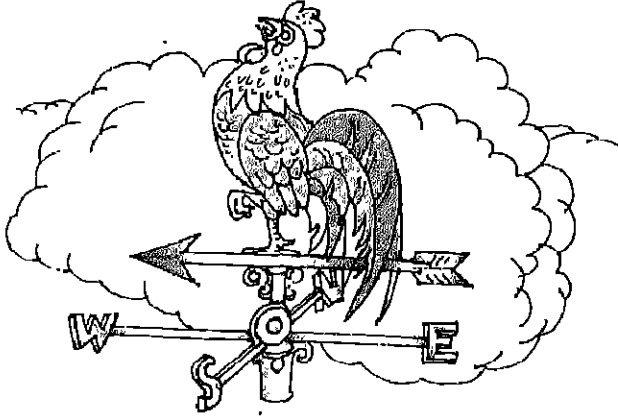
धरती के सबसे निकट सघन वायु वाली परत को **क्षोभमंडल** कहा जाता है। यह वह परत है जहाँ हम रहते हैं। धूल के कण तथा जलवाष्प की उपस्थिति के कारण इस मंडल में विविध प्रकार की मौसम संबंधी घटनाएँ होती रहती हैं। औसत रूप से इस मंडल का विस्तार 11 किमी. है, परंतु इसकी ऊँचाई ध्रुवीय क्षेत्रों की अपेक्षा विषुवत रेखा पर अधिक होती है।

क्षोभमंडल के ऊपर स्वच्छ एवं शीतल वायु की परत **समतापमंडल** पाई जाती है। **क्षोभमंडल** से **समतापमंडल** को पृथक करने वाले क्षेत्र को **क्षोभ सीमा (ट्रोपोपाज़)** कहते हैं। समताप-मंडल के ऊपर मध्यमंडल स्थित है। **ओज़ोन** एक विशेष प्रकार की ऑक्सीजन है जो ऊपरी क्षोभमंडल तथा मध्यमंडल में पाई जाती है। वायुमंडल में इस ओज़ोन गैस की उपस्थिति बहुत महत्त्वपूर्ण है क्योंकि यह हानिकारक पराबैंगनी किरणों को अवशोषित करने का काम करती है और उन्हें पृथ्वी तल तक पहुँचने में रोकती है। यदि ये पराबैंगनी किरणें धरातल तक पहुँच जाएँ तो वे हमारे जीवन के लिए बहुत खतरनाक होंगी।

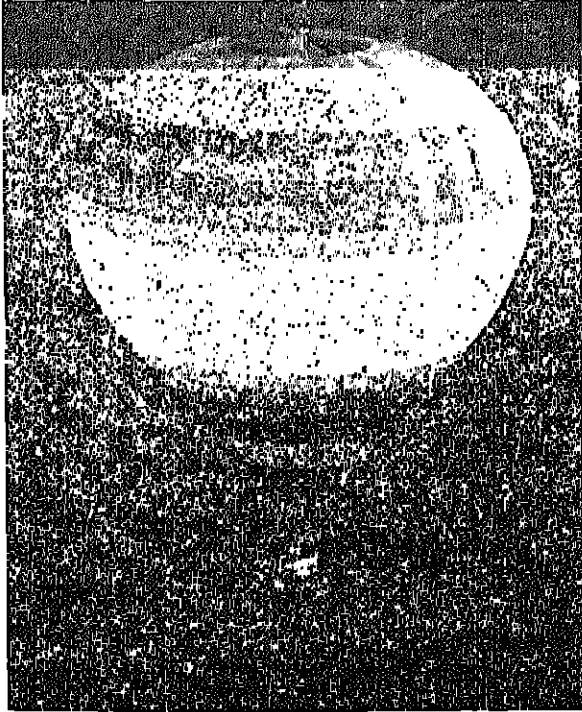
मध्यमंडल के ऊपर **बाह्य वायुमंडल (थर्मोस्फ़ीयर)** है जहाँ वायु बहुत विरल होती है। थर्मोस्फ़ीयर के ऊपर वायुमंडल धीरे-धीरे बाह्य अंतरिक्ष की बहुत हल्की गैसों में बदल जाता है। मध्यमंडल के ऊपरी भाग से थर्मोस्फ़ीयर के एक बड़े हिस्से तक की परत को **आयनमंडल** कहते हैं। यहाँ गैसों के कण विद्युत चालित तरंगों वाले होते हैं जिन्हें आयन कहते हैं, यह आयनमंडल हमारी संचार व्यवस्था में महत्त्वपूर्ण योगदान देता है। आयनमंडल के माध्यम से ही रेडियो तरंगें विभिन्न स्थानों को भेजी जा सकती हैं। आपने कक्षा 6 की पाठ्यपुस्तक में वायुमंडल की परतों का चित्र ज़रूर देखा होगा।

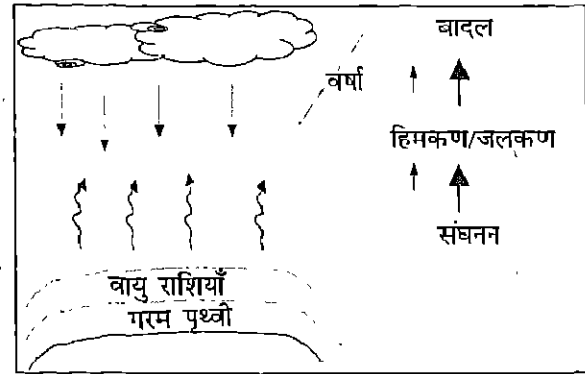
ग्रीन हाउस प्रभाव

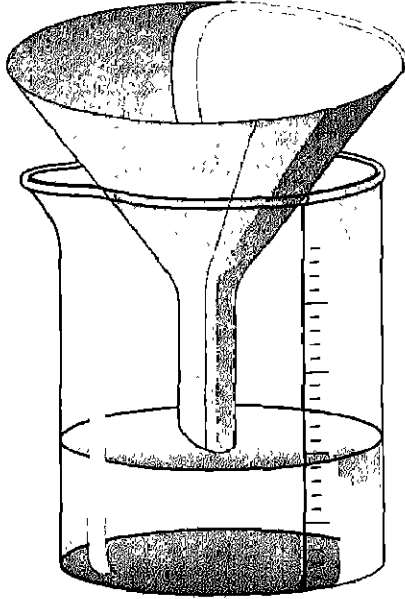
सौर ऊर्जा से स्थल तथा जल गरम होते हैं। गरम होने के बाद जल तथा स्थल दोनों ही पुनः विकिरण द्वारा ऊर्जा को वायुमंडल में वापस भेजते हैं। वायु में पाई जाने वाली कार्बन-डाइऑक्साइड तथा जलवाष्प द्वारा वायुमंडल में वापस जाने वाली यह ऊष्मा अवरोधित हो जाती है। यह अवरोधित ऊष्मा पृथ्वी को गरम करने लगती है, जिसे **ग्रीन हाउस प्रभाव** कहते हैं।

विभिन्न कारणों से पृथ्वी निरंतर गरम हो रही है जिसे **भूमंडलीय तापन** कहते हैं। आज यह एक गंभीर पर्यावरण समस्या है।

पवन दिक्सूचक

वायु दाब में अंतर होने के कारण **वायु** में गति उत्पन्न होती है और गतिशील वायु को पवन कहते हैं।

जिन क्षेत्रों में तापमान उच्च होता है, वायु गरम होकर ऊपर उठती है। इन क्षेत्रों में वायु का दाब कम हो जाता है और यह क्षेत्र **वायु विहीन** बन जाता है। चूँकि वायुमंडल में कोई स्थान निर्वात नहीं रह सकता अत: आसपास के अपेक्षाकृत ठंडे तथा उच्च दाब वाले क्षेत्रों से हवा निम्न दाब वाले क्षेत्र के निर्वात स्थान को भरने के लिए आ जाती है। इस प्रकार पवन उत्पन्न होती है। मानसून पवनों के चलने का एक अच्छा उदाहरण है। भारतीय कृषि मानसून पर निर्भर करती है। विभिन्न प्रकार की अन्य पवनों के बारे में आप आगे पढ़ेंगे।

गरम हवा से भरा गुब्बारा ऊपर उठते हुए

गरम वायु ऊपर उठती है और वायुमंडल के ऊपरी भाग में पहुँचती है जहाँ तापमान बहुत कम होता है। यहीं पर संघनन होता है। वायु में जलवाष्प के रूप में उपस्थित जल संघनन की प्रक्रिया में छोटे-छोटे **जलकणों**

जल-वर्षा की प्रक्रिया

एवं **हिमकणों** में परिवर्तित हो जाता है। जल या हिम के ये कण वायु में तैरते रहते हैं। समय के साथ जल के कण और हिमकण आपस में मिलकर बादलों का निर्माण करते हैं। आप सबने बादलों को आकाश में तैरते हुए देखा होगा। अधिक भारी होने पर वे (जल या हिम कण) तैर नहीं पाते तो वर्षा या हिमपात के रूप में नीचे आ जाते हैं। वायु में जल की उपस्थिति को **आर्द्रता** कहते हैं।

वर्षामापी यंत्र

रचना तंत्र के आधार पर वर्षा को **संवहनीय, पर्वतकृत** तथा **वाताग्री** के रूप में वर्गीकृत किया जाता है। पौधों तथा जीव-जंतुओं के जीवित रहने के लिए वर्षा बहुत महत्त्वपूर्ण है। इससे धरातल को ताज़ा जल प्राप्त होता है। यदि वृष्टि कम हो तो जल की कमी तथा सूखा हो जाता है। इसके विपरीत अगर वर्षा अधिक होती है तो बाढ़ आ जाती है। वर्षा की मात्रा एक यंत्र की सहायता से नापी जा सकती है जिसे **वर्षामापी** कहते हैं।

वायुमंडल की दिन-प्रतिदिन की दशाएँ जैसे- तापमान, वृष्टि, आर्द्रता आदि मौसम कहलाती हैं। किसी स्थान के मौसम की औसत दशाओं को उस स्थान की जलवायु कहते हैं। प्रतिदिन के समाचार-पत्रों या दूरदर्शन प्रसारण में मौसम की दशाओं की सूचना तथा पूर्वानुमान दिया जाता है। हमारे जीवन में मौसम तथा जलवायु का बहुत महत्त्व है। हमें मौसम का ज्ञान होना चाहिए क्योंकि यह बहुत उपयोगी है। यदि हमें यह ज्ञात हो कि अपराह्न में वर्षा होगी तो हम बरसाती या छाता लेकर स्कूल जाएँगे और भीगने से बच जाएँगे। मौसम की सूचनाओं में हमें सूर्योदय तथा सूर्यास्त के समय की भी जानकारी मिलती है। आप अपने समाचार-पत्र में मौसम संबंधी सूचना का 15 दिनों तक अध्ययन करके देख सकते हैं कि मौसम की दशाएँ कैसे बदलती हैं।

अभ्यास

निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए

(क) वायुमंडल किसे कहते हैं?
(ख) वायुमंडल के मुख्य मंडल कौन से हैं?
(ग) वायुमंडल की प्रमुख गैसों के नाम बताइए।
(घ) वायुदाब मापने वाले यंत्र का नाम बताइए।
(ङ) क्षोभमंडल किसे कहते हैं?

2. रिक्त स्थानों की पूर्ति कीजिए

(क) नाइट्रोजन वायु के कुल आयतन का __________ है।

(ख) कम आयतन में पाई जाने वाली गैसें आरगन, __________ तथा __________ हैं।

(ग) नगरों में अधिक यातायात वाले क्षेत्रों में वायु में ______ अधिक मिल जाती है।

(घ) आयनमंडल __________ में महत्त्वपूर्ण योगदान देता है।

(ङ) वायु में जल की उपस्थिति को __________ कहते हैं।

(च) वर्षा की मात्रा __________ यंत्र द्वारा मापी जा सकती है।

3. निम्नलिखित स्तंभों को मिलाकर सही जोड़े बनाइए

(क) वायुदाबमापी	(अ) तापमान के अंतर से वायु में उत्पन्न गति।
(ख) क्षोभमंडल	(ब) वायु में जलवाष्प की मात्रा।
(ग) आर्द्रता	(स) वायुमंडलीय दाब मापने वाला एक यंत्र।
(घ) संवहन	(द) वायुमंडल की सबसे सघन परत।

4. परियोजना कार्य

- वर्षामापी यंत्र का प्रयोग करके आप वर्षा ऋतु में अपने क्षेत्र की रोज होने वाली वर्षा को मापिए।

अध्याय 5

महाद्वीपों को घेरने वाला जल

हमारी पृथ्वी का सत्तर प्रतिशत से अधिक भाग जल से ढका हुआ है। पृथ्वी का अधिकांश जल महासागरों तथा समुद्रों में पाया जाता है। नदियों, झीलों, हिमानी व हिमक्षेत्रों तथा वायु में भी जल रहता है। जल एक स्थान से दूसरे स्थान की ओर गतिशील रहता है। जो जल कभी हिंद महासागर में था, हो सकता है अब आपके नल में हो या फिर ऊपर बादलों में हो। जल महासागरों से ऊपर वायु में जाता है। वहाँ से यह स्थल अथवा सागरों के ऊपर बरस भी सकता है। वर्षा का जल नदियों से होकर पुनः समुद्र में वापस जाता है। जल की यह गति **जल-चक्र** कहलाती है। जल-चक्र का न कोई प्रारंभ होता है और न कोई अंत।

महासागरों के जल के ऊपर सूर्य की किरणें पड़ने से **वाष्पीकरण** होता है। सूर्य की गरमी के कारण महासागर का जल वाष्प में रूपांतरित हो जाता है। जब यह जलवाष्प ऊपरी वायुमंडल में पहुँचती है तो संघनन प्रारंभ हो जाता है। संघनन, जलवाष्प के जल को जलकणों या हिमकणों में रूपांतरित कर देता है। जल या हिम के ये कण वायु में तैरते रहते हैं और बादलों का निर्माण करते हैं। जब जलकण या हिमकण आकार में बड़े हो जाते हैं और वायु में तैर नहीं पाते तब वे वर्षण के रूप में धरती पर गिरते हैं।

बड़ी मात्रा में वर्षा होने पर कुछ जल ज़मीन सोख लेती है, कुछ धाराओं के रूप में बह जाता है या गड्ढों में रुका रहता है जिससे तालाब या झीलें बनती हैं। धाराएँ या नदियाँ धरातल पर बहती हैं और समुद्रों या महासागरों में मिलती हैं।

जब वर्षा का जल ज़मीन सोख लेती है तब इसे **भूमिगत जल** कहते हैं। भूमिगत जल पौधों के लिए जल का महत्त्वपूर्ण स्रोत होता है। पादप अपनी जड़ों द्वारा भूमि से जल ग्रहण करते हैं और अपनी पत्तियों द्वारा उसे जलवाष्प के रूप में पुनः वायु को दे देते हैं। पादपों की इस क्रिया से जल वापस देने को **वाष्पोत्सर्जन** कहते हैं। निम्न तापमान वाले क्षेत्रों में पानी बहुत धीरे बहता है क्योंकि यह बर्फ़ के रूप में होता है। बहती हुई बर्फ़ की नदी को **हिमानी** कहते हैं जो उच्च अक्षांशों या अधिक ऊँचाइयों वाले क्षेत्रों में पाई जाती हैं।

वास्तव में पृथ्वी पर जल की मात्रा सदैव एक समान रहती है। यह अनेक रूपों में पाया जाता है, जैसे जल, जलवाष्प या हिम के रूप में। इस प्रकार हमारी पृथ्वी का एक **जल-बजट**

या भूमंडलीय जल-संतुलन है जिसमें वर्षण आय के समान है जबकि वाष्पीकरण और वाष्पोत्सर्जन व्यय है। कुछ क्षेत्रों में वसंत ऋतु में बर्फ़ पिघलने या अधिक वर्षा के कारण अधिक जल एकत्र हो जाता है। इस अतिरिक्त जल के कारण जल-संतुलन बिगड़ जाता है। इससे विपरीत स्थिति भी हो सकती है। गरमियों में वाष्पीकरण बढ़ जाता है जिससे मौसम शुष्क हो जाता है तथा जल-आपूर्ति कम हो जाती है। हम पृथ्वी का जल-बजट नहीं बदल सकते परंतु जल के प्रयोग को नियंत्रित कर सकते हैं। नगरों या उद्योगों में प्रयोग होने वाले जल का बड़ा भाग नदियों या महासागरों में अनुपयोगी जल के रूप में वापस चला जाता है। इनमें प्रायः हानिकारक पदार्थ होते हैं। हमें स्मरण रखना चाहिए कि हम जल की मात्रा बढ़ा नहीं सकते क्योंकि यह सीमित है। बढ़ती हुई जनसंख्या की आवश्यकताओं की पूर्ति के लिए पर्याप्त जल सुलभ हो सके, इसके लिए हमें जल के उपयोग में अत्यंत सावधान रहना चाहिए। इस अमूल्य संसाधन को सुरक्षित रखने के लिए **जल-संरक्षण** हमारे जीवन का एक भाग होना चाहिए।

आप अपने दैनिक जीवन में जल के प्रयोग की एक सूची बना सकते हैं। तब ही आपको ज्ञात होगा कि समझदारी से प्रयोग करने पर आपके हिस्से का जल सुरक्षित रह सकता है।

लहरें तथा महासागरीय ज्वार-भाटा

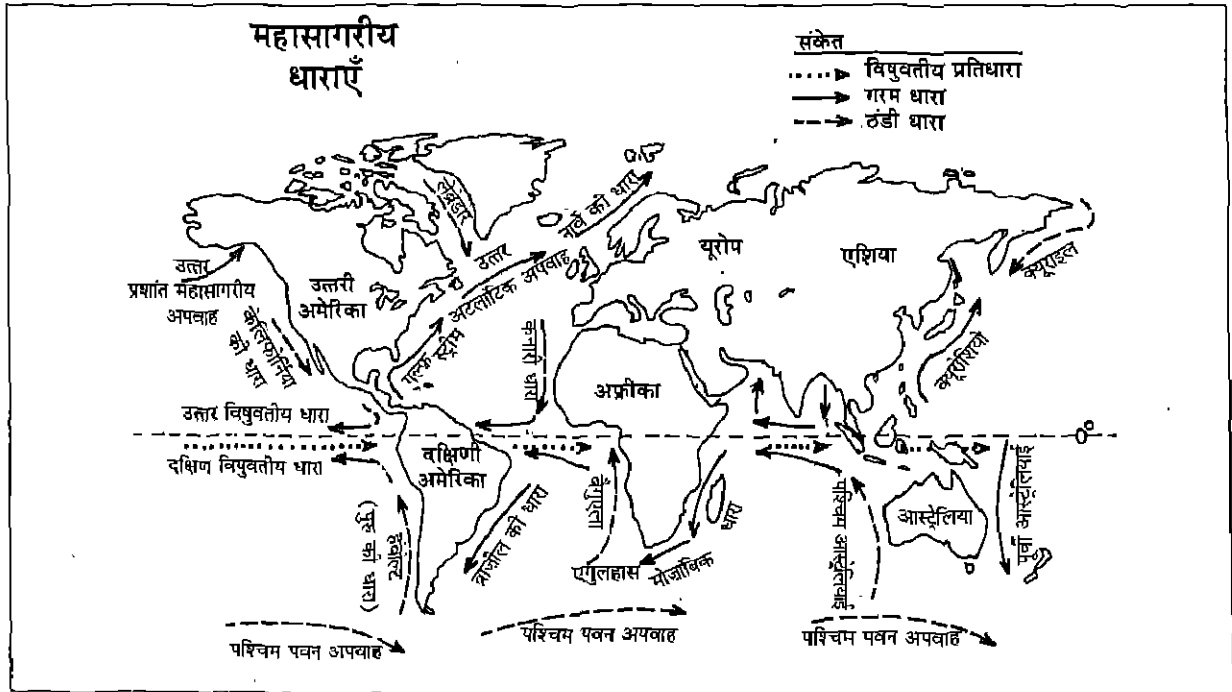
जब हम समुद्र के निकट जाते हैं, तब लहराती हुई तरंगें हमें मोहित कर लेती हैं। तरंगें या लहरें समुद्री जल की उच्छृंखलता प्रदर्शित करती हैं। परंतु यह लहरें कैसे बनती हैं? आप किसी तालाब में एक कंकड़ फेंकिए और तब देखिए क्या होता है। आप जल में तरंगें देखेंगे। इसी प्रकार समुद्रों के ऊपर चलने वाली हवा बड़ी तरंगें निर्मित करती है जिन्हें **लहरें** कहते हैं। लहरें कितनी बड़ी होंगी, यह इस बात पर निर्भर है कि पवन कितनी तेज़ है। महासागरीय लहरें जब छिछले जल-क्षेत्र में पहुँचती हैं तब टूट जाती हैं। तूफ़ान के समय पवन की गति तेज़ होने के कारण ज़्यादा ऊँची लहरें उठती हैं। ऐसी बड़ी लहरें प्रायः प्रलय मचाती हैं। **सुनामी** ऐसी ही बड़ी लहरें हैं। सुनामी एक जापानी नाम है। ये लहरें भूकंप, महासागरों के नीचे ज्वालामुखी उद्गार या अन्य ऐसी हलचलों से उत्पन्न होती हैं। आजकल लहरों की शक्ति का प्रयोग विद्युत उत्पादन के लिए भी किया जाता है।

समुद्र तटीय लहरें

समुद्र का जल प्रतिदिन लगभग नियमित अंतराल पर दो बार ऊपर उठता और नीचे गिरता है। ऐसा सूर्य तथा चंद्रमा के गुरुत्वाकर्षण के कारण होता है। इसे **ज्वार** कहते हैं। समुद्र के जल के ऊपर उठने को **उच्च ज्वार** तथा इसके नीचे गिरने को **निम्न ज्वार** या भाटा कहते हैं। हमारी कुछ आर्थिक क्रियाओं जैसे

मछली पकड़ने तथा नौ-संचालन में ज्वार-भाटा महत्त्वपूर्ण है। कभी-कभी उच्च ज्वार बड़े जलयानों के पोताश्रय तक आने तथा पोताश्रय से बाहर जाने में सहायक होते हैं। हुगली पर स्थित कोलकाता बंदरगाह ज्वार-भाटा के उपयोग का एक अच्छा उदाहरण है। यहाँ पोताश्रय में ज्वार-भाटा के समय जलयानों के आवागमन में आसानी होती है।

हम जानते हैं कि समुद्री जल की अधिकांश गतियाँ पवन के परिणामस्वरूप होती हैं। पवन समुद्र की सतह पर चलती है और **समुद्री** या **महासागरीय धाराएँ** उत्पन्न करती है। यहाँ सागरीय धाराएँ क्या हैं? जब समुद्र का जल एक विशेष दिशा में निरंतर बहता रहता है तब जलधारा की उत्पत्ति होती है। जलधाराएँ महासागरीय जल के गरम और ठंडे होने से भी बनती हैं। ठंडा जल सघन और भारी होता है तथा गरम जल अपेक्षाकृत कम सघन और हल्का होता है, इसलिए ठंडा जल नीचे बैठ जाता है। ध्रुवीय क्षेत्रों का ठंडा जल समुद्र की तलहटी के साथ-साथ धीरे-धीरे विषुवत रेखा की ओर गतिशील होता है। विषुवत रेखा के निकट से गरम जल महासागरों की सतह पर ध्रुवों की ओर प्रवाहित होने लगता है। इसी प्रकार सामान्य जलधाराएँ उत्पन्न होती हैं।

आप नीचे दिए हुए मानचित्र में प्रशांत तथा अटलांटिक महासागरों की प्रमुख महासागरीय धाराओं को देख सकते हैं। गरम तथा ठंडी महासागरीय धाराओं की एक सूची तैयार कीजिए। यदि आप ध्यानपूर्वक उनकी दिशाएँ देखें तो आप पाएँगे कि उत्तरी गोलाद्र्ध में ये धाराएँ अपनी दाईं ओर (घड़ी की सुइयों के घूमने की दिशानुसार) और दक्षिणी गोलाद्र्ध में अपनी बाईं ओर (घड़ी की सुइयों के घूमने की दिशा के विपरीत) मुड़ जाती हैं। गरम महासागरीय धाराएँ निम्न अक्षांशों से उच्च अक्षांशों की ओर और ठंडी

संसार की प्रमुख महासागरीय धाराएँ

महासागरीय धाराएँ उच्च अक्षांशों से निम्न अक्षांशों की ओर बहती हैं।

महासागरीय जलधाराओं की प्रकृति से तटीय क्षेत्रों तथा द्वीपों की जलवायु प्रभावित होती है। यदि किसी स्थान या द्वीप के तट के निकट गरम महासागरीय धारा गुज़रती है तो इससे तापमान बढ़ जाता है और वह स्थान अपनी सामान्य जलवायु की अपेक्षा अधिक गरम हो जाता है। इसी प्रकार ठंडी महासागरीय धारा किसी स्थान को अधिक ठंडा कर देती है। जापान के तट के निकट क्यूरोशियो (गरम) तथा ओयाशियो (ठंडी) महासागरीय धाराओं के उदाहरण हैं। अटलांटिक महासागर की धाराओं की एक सूची बनाइए।

जिन तटीय क्षेत्रों के निकट गरम जलधाराएँ बहती हैं वहाँ प्रायः वर्षा होती है क्योंकि गर्म वायु अधिक आर्द्रता ग्रहण कर लेती है। इसके विपरीत, ठंडी जलधाराओं से प्रभावित क्षेत्र शुष्क तथा ठंडी जलवायु का अनुभव करते हैं।

ठंडी तथा गरम महासागरीय धाराओं के मिलने से मछलियों के भोजन की मात्रा में वृद्धि हो जाती है। ऐसे क्षेत्रों में मछली पकड़ना एक प्रमुख आर्थिक व्यवसाय है। दिए हुए मानचित्र से हम ऐसे क्षेत्रों की स्थिति ज्ञात कर सकते हैं।

महासागरीय धाराएँ नौ-संचालन में भी सहायक होती हैं। धाराओं की दिशा में जाने वाले जलयान अधिक तेजी से गतिशील होते हैं जबकि धाराओं की विपरीत दिशा में नौ-संचालन कठिन कार्य होता है।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) भूमिगत जल किसे कहते हैं?
   (ख) हिमानी की परिभाषा दीजिए।
   (ग) सुनामी क्या है?
   (घ) लहरों तथा महासागरीय धाराओं के बीच क्या अंतर है?
   (ङ) जल-संरक्षण का अर्थ स्पष्ट कीजिए।

2. **निम्न स्तंभों को मिलाकर सही जोड़े बनाइए**

(क) ढाल	(अ) हिमानी
(ख) अधिक ऊँचाई	(ब) लहरें
(ग) सुनामी	(स) मृदा अपरदन
(घ) महासागरीय धाराएँ	(द) हुगली
(ङ) बंदरगाह	(घ) मछली पकड़ना

3. **परियोजना कार्य**

- संसार के मानचित्र पर गरम तथा ठंडी दोनों प्रकार की प्रमुख महासागरीय धाराएँ दिखाइए। इसमें मुख्य क्षेत्र भी अंकित कीजिए और उनके तथा धाराओं के बीच संबंध स्थापित करने का प्रयत्न कीजिए।

अध्याय 6

पृथ्वी पर जीवन

यद्यपि हमारी पृथ्वी बहुत बड़ी है और इसके धरातल पर अनेकों भू-आकृतियाँ पाई जाती हैं, फिर भी इस ग्रह पर जीवन इसके चारों ओर केवल एक पतली परत में ही पाया जाता है। पृथ्वी के जिस भाग पर जीव रहते हैं वह जैवमंडल कहलाता है। इस मंडल में वायुमंडल, स्थलमंडल तथा जलमंडल के भाग सम्मिलित हैं, जैसा हमने पिछले अध्यायों में पढ़ा है। यह पृथ्वी के धरातल का वह भाग है जहाँ पौधे और जीव-जंतु पाए जाते हैं। अतः पृथ्वी पर अधिकांश जीव धरातल और जल की सतह के निकट या वायुमंडल के निचले भाग में पाए जाते हैं। जैवमंडल हमारी पृथ्वी के चारों ओर एक बहुत पतली परत है।

क्या आप जानते हैं?

जैवमंडल समुद्रतल से 11 किलोमीटर की गहराई और वायुमंडल में समुद्रतल से 17 किलोमीटर की ऊँचाई के बीच स्थित है। इस प्रकार जैवमंडल की अधिकतम मोटाई लगभग 28 किलोमीटर है। परंतु पृथ्वी की यह पतली परत हमारे ग्रह का सबसे महत्त्वपूर्ण भाग है।

सौरमंडल में संभवतः पृथ्वी अकेला ग्रह है जहाँ जीवित रहने के लिए उपयुक्त स्थितियाँ पाई जाती हैं। जीवन का उद्गम सबसे पहले महासागरों में हुआ था। समय के साथ जीवन विकसित हुआ तथा विभिन्न प्रजातियों में अधिक-से-अधिक बँटता गया, जैसा हम आज देखते हैं कि इस विकास-क्रम ने जैव-विविधता को पर्याप्त विकसित किया है।

मनुष्य जैवमंडल का सबसे महत्त्वपूर्ण अंग है। समय के साथ मानव जीवन के विकास ने जीवन के अन्य रूपों पर बहुत प्रभाव डाला है। मनुष्य ही जैवमंडल का ऐसा जीव है जिसने अपनी आवश्यकताओं की पूर्ति के लिए जानबूझकर पर्यावरण को परिवर्तित किया है। जैसे-जैसे संसार में मानव जनसंख्या में वृद्धि हुई है, प्राकृतिक संसाधनों को अधिक-से-अधिक प्रयोग करने के लिए नई-नई तकनीकें खोजी गई हैं। इससे संपूर्ण संसार में अनेक पर्यावरणीय समस्याएँ उत्पन्न हुई हैं। पूर्वकाल में पर्यावरण पर मनुष्य का प्रभाव वस्तुतः नगण्य रहा है। फलस्वरूप पर्यावरण की हानि भी अपेक्षाकृत कम हुई थी। परंतु अब यही हानि एक महत्त्वपूर्ण मुद्दा बन गई है।

कृषि, वृक्ष काटना तथा शहरों एवं नगरों के विकास आदि जैसी मानवीय क्रियाओं का

जैव-विविधता पर बहुत प्रतिकूल प्रभाव पड़ा है। मानवीय क्रियाओं के कारण जैव-विविधता का ह्रास अब एक प्रमुख चिंता का विषय है। आप जोहांसबर्ग में 2002 ई. में हुए द्वितीय पृथ्वी सम्मेलन के कुछ समाचार एकत्र कर सकते हैं जिससे यह ज्ञात हो सकेगा कि मनुष्य इस संबंध में कितना चिंतित है।

जैवमंडल में मनुष्यों के अतिरिक्त पशु, पक्षी, कीड़े-मकोड़े और पौधे भी होते हैं। जीवों का सबसे सरल वर्गीकरण उन्हें वनस्पति-जगत और प्राणि-जगत में बाँट कर किया जाता है। प्रजातियों की कुल संख्या बताना लगभग असंभव है क्योंकि उनमें से अधिकांश उपलब्ध नहीं हैं अथवा उन्हें कोई नाम नहीं दिया गया। आकार में अपेक्षाकृत बड़े पशुओं, पक्षियों और पौधों को गिनना आसान है। परंतु मृदा, समुद्रों, जंगलों और दलदल में भी अनेक जीव होते हैं।

क्या आप जानते हैं?

पारिस्थितिक तंत्र प्रकृति का वह तंत्र है जिसमें विभिन्न जीव एक-दूसरे तथा पर्यावरण के साथ अंतरक्रियाएँ करते हैं।

इन प्रजातियों की भिन्नता के बीच एक बहुत ही सुंदर क्रम तथा नियम है। जैव तथा अजैव तत्त्व प्रकृति में सुसंगति से रहते हैं। जीवित रहने के लिए वे एक-दूसरे पर आश्रित रहते हैं। उदाहरणस्वरूप हरे पादप सूर्य की किरणों द्वारा प्राप्त होने वाली ऊर्जा का प्रकाश संश्लेषण की क्रिया से अपना भोजन बनाने के लिए प्रयोग करते हैं, परंतु पशु इस विधि से अपना भोजन नहीं तैयार कर सकते। परिणामत: पशु अपने जीवन के लिए पौधों या अन्य पशुओं पर निर्भर होते हैं। मनुष्य शाकाहारी तथा माँसाहारी होते हैं अर्थात वनस्पति एवं पशुओं, दोनों से भोजन प्राप्त करते हैं। विभिन्न जीवों के बीच भोजन संबंधी संबंध हैं।

पादप-जगत में हम पादपों को वनों, घास के मैदानों, काँटेदार झाड़ियों तथा झाड़ियों में विभक्त कर सकते हैं। ये भिन्नताएँ जलवायु में अंतर के कारण पाई जाती हैं। ऊँचे वृक्षों वाले वन प्राय: पर्याप्त जल वाले क्षेत्रों में पाए जाते हैं। सामान्य वर्षा वाले क्षेत्रों में घास के मैदान

सदाबहार वन (अमेज़न)

पाए जाते हैं। कम वर्षा वाले क्षेत्रों में काँटेदार झाड़ियाँ और ध्रुवीय क्षेत्रों में टुंड्रा वनस्पति पाई जाती है।

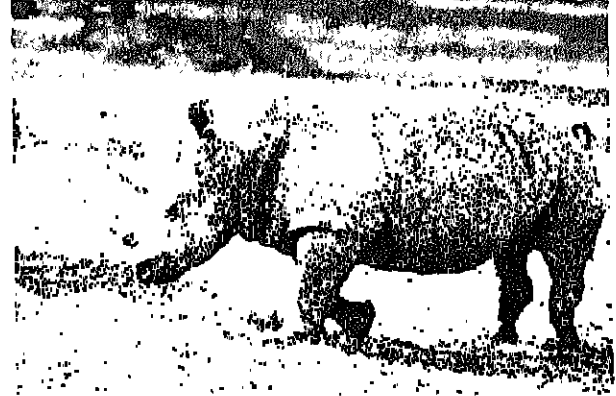
पर्णपाती वन

वनों को मोटे रूप से सदाबहार तथा पर्णपाती वनों में विभक्त किया जाता है। सदाबहार वनों को ऐसा इसलिए कहते हैं क्योंकि ऐसी कोई विशेष ऋतु नहीं है जब इन वृक्षों की सभी पत्तियाँ झड़ जाती हों। इसीलिए इस प्रकार के

घास के मैदान

वन पूरे वर्ष हरे-भरे लगते हैं। इसके विपरीत पर्णपाती वनों में, एक विशेष ऋतु में अधिकांश वृक्ष अपनी पत्तियाँ गिरा देते हैं। ऐसा ये अधिकतर शुष्क ऋतु में करते हैं जिससे इनकी नमी सुरक्षित रह सके।

घास लंबी जड़ों वाली वनस्पति होती है जो शुष्क मौसम में भी जीवित रह सकती है। यह जलवायु की विभिन्न दशाओं में पाई जाती है। विभिन्न देशों तथा महाद्वीपों में घास के मैदानों के विभिन्न नाम हैं — इन्हें अफ्रीका में **सवाना**, ब्राजील में **कैंपोस**, यूरेशिया में **स्टेपी**, उत्तरी अमेरिका में **प्रेयरी**, दक्षिण अफ्रीका में **वेल्ड**, दक्षिण अमेरिका में **पंपाज़** और आस्ट्रेलिया में **डाउंस** कहते हैं।

मरुस्थलीय तथा अर्धमरुस्थलीय क्षेत्रों में जहाँ वर्षा बहुत कम होती है काँटेदार झाड़ियाँ तथा अन्य झाड़ियाँ पाई जाती हैं। यूरोप, एशिया तथा उत्तरी अमेरिका के ठंडे ध्रुवीय क्षेत्रों में टुंड्रा तुल्य वनस्पति पाई जाती है। छोटी ग्रीष्म ऋतु में वहाँ वनस्पति को उगने के लिए कम समय मिल पाता है। जाड़ों में जब भूमि हिम से ढक जाती है, तब यहाँ वनस्पति लुप्त हो जाती

गैंडा

है। एक ओर पशुओं तथा दूसरी ओर जलवायु और प्राकृतिक वनस्पति के बीच बहुत घनिष्ठ संबंध है। गरम तथा आर्द्र उष्ण कटिबंधीय जलवायु में विभिन्न प्रकार के पशु, पक्षी तथा कीड़े-मकोड़े पाए जाते हैं। यहाँ पाए जाने वाले कुछ बड़े पशु हाथी, बाघ, शेर, बंदर, हिरन, जंगली सुअर और गैंडा हैं। चूँकि यहाँ वन बहुत सघन हैं, अत: इनमें अनेक प्रकार के पक्षी तथा कीड़े-मकोड़े भी पाए जाते हैं।

मध्य अक्षांशों में पशु, पक्षी तथा कीटों के कम प्रकार पाए जाते हैं। घास के मैदानों में जेबरा, हिरन, बारहसिंघा, बाघ, शेर, लोमड़ी और खरगोश पाए जाते हैं।

ठंडे ध्रुवीय क्षेत्रों में पशु काफी भिन्न होते हैं। ठंड से बचने के लिए उनकी खाल ज़्यादा मोटी होती है और उनके शरीर पर फ़र या बाल अधिक होते हैं। इनमें से कुछ ठंड से बचने के

लिए तथा भोजन की तलाश में ठंडी ऋतु में अपेक्षाकृत गरम क्षेत्रों की ओर चले जाते हैं।

पशुओं, पादपों तथा स्थानीय जलवायु दशाओं में बहुत घनिष्ठ संबंध होता है। इस संबंध ने ऐसी व्यवस्था प्रदान की है जहाँ वे जीवित रह सकते हैं। प्राकृतिक पर्यावरण तथा उसके निवासियों के बीच अंतर्संबंधों को **पारिस्थितिक तंत्र** कहते हैं।

बढ़ती हुई जनसंख्या ने प्राकृतिक प्रक्रियाओं में हस्तक्षेप करके समय के साथ-साथ अपनी आवश्यकताओं की पूर्ति के लिए पर्यावरण को परिवर्तित किया है। कृषि, उद्योग, आवास तथा यातायात के लिए वन साफ़ करने से प्रकृति का संतुलन बिगड़ गया है। संतुलन-ह्रास के कारण पादपों तथा पशुओं की अनेक प्रजातियों के लुप्त होने का संकट है। संतुलन-ह्रास का विस्तृत प्रभाव वायुमंडल तथा जलमंडल पर भी पड़ रहा है जिसके फलस्वरूप वे सब हमें भी प्रभावित कर रहे हैं। प्रकृति में संतुलन के बिगड़ने का ही परिणाम भूमंडलीय ऊष्मीकरण (तापन) है।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) जैवमंडल की परिभाषा दीजिए।
   (ख) मनुष्य जीवन के अन्य रूपों को कैसे प्रभावित करता है?
   (ग) जैव-विविधता से आप क्या समझते हैं?
   (घ) जैव-विविधता के ह्रास के लिए उत्तरदायी मानवीय क्रियाओं का उल्लेख कीजिए।
   (ङ) खाद्य-शृंखला की परिभाषा दीजिए।

2. **सही कथनों पर (✓) का चिह्न लगाइए**

   (क) दो मुख्य प्रकार के वन होते हैं — सदाबहार तथा झाड़ियाँ/सदाबहार तथा पर्णपाती।
   (ख) विभिन्न प्रकार की घास शुष्क ऋतु में जीवित रह सकती है क्योंकि उसकी जड़ें लंबी/छोटी होती हैं।
   (ग) घास के मैदानों को अफ्रीका में सवाना/प्रेयरी कहा जाता है।
   (घ) पारिस्थितिक तंत्र अर्थव्यवस्था तथा भूमि/प्राकृतिक पर्यावरण और निवासियों के बीच का अंतर्संबंध है।
   (ङ) द्वितीय पृथ्वी सम्मेलन रियो डी जैनिरो/जोहांसबर्ग में हुआ था।

3. **परियोजना कार्य**

   - अपने क्षेत्र में उगने वाले वृक्षों की पत्तियों के नमूने एकत्र कीजिए।
   - गरमियों तथा जाड़ों में आपने जो पक्षी देखे हैं उनकी अलग-अलग सूची बनाइए।

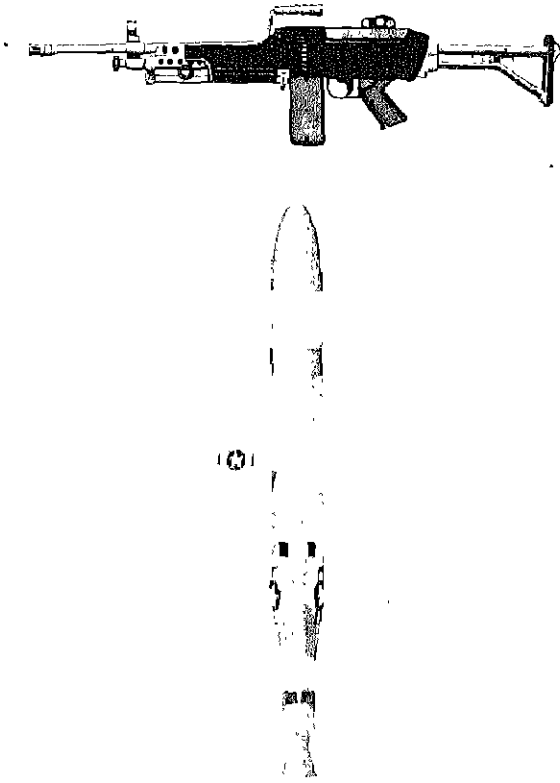
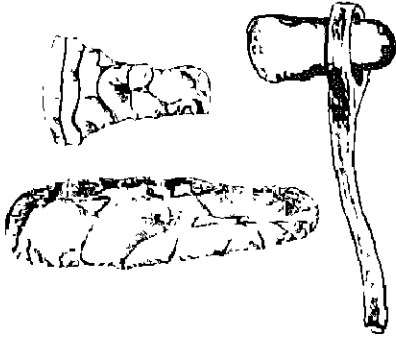
अध्याय 7

मानवीय पर्यावरण
बस्तियाँ, परिवहन तथा संचार

मानवीय अथवा सांस्कृतिक पर्यावरण हमारे संपूर्ण पर्यावरण का एक महत्त्वपूर्ण अंग है। लगभग 30 लाख वर्ष पूर्व, हिम युग के समय, संभवतः पहली बार धरती पर मानव जीवन का प्रारंभ हुआ। किसी अन्य जीव का पृथ्वी पर इतना फैलाव नहीं है। इसका मुख्य कारण है कठिन से कठिन पर्यावरण में रहने अथवा जीवित रहने के लिए मानव की अद्‌वितीय अनुकूलनशीलता।

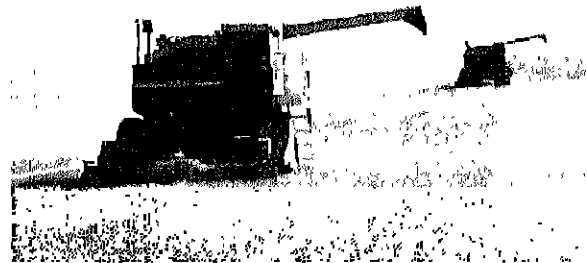
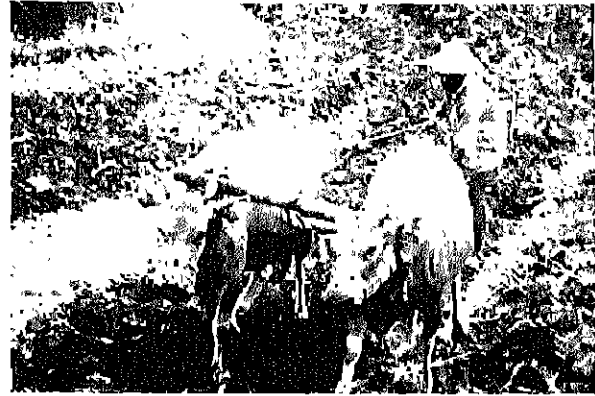
कृषि से पूर्व मानव समुदाय आखेट तथा भोजन संग्रह करके जीवित रहते थे। वे एक स्थान से दूसरे स्थान तक भोजन की तलाश में घूमा करते थे। इस प्रकार के जीवन को **चलवासी जीवन** कहते हैं। परंतु कृषि की विभिन्न विधियों के आविष्कार के पश्चात लोगों की जीवन शैली में कुछ स्थायित्व आया। धीरे-धीरे बस्तियों की अवधारणा का जन्म हुआ। जनसंख्या के विस्तार तथा उसकी वृद्‌धि में कृषि का महत्त्वपूर्ण प्रभाव रहा। औद्‌योगिक क्रांति ने इस प्रक्रिया को और अधिक गतिशील बना दिया। आग जलाने, कपड़े पहनने, आवास बनाने तथा यंत्र विकसित करने का ज्ञान बढ़ने के साथ-साथ, मनुष्य ने प्रकृति को भी परिवर्तित करना प्रारंभ कर दिया, जो अन्य कोई जीव नहीं कर सका। हाल के वर्षों में तकनीकी विकास ने मनुष्य को कठोर तापमान, बीहड़ भू-भाग तथा दुर्गम स्थलों के अवरोधों को भी पार करने की क्षमता प्रदान की है। इन्होंने पहले मानव जनसंख्या की गतिशीलता को नियंत्रित कर रखा था। इतिहास के विभिन्न चरणों में मनुष्य ने अनेक यंत्र विकसित करके अपने सांस्कृतिक विकास का परिचय दिया है। इन्हीं यंत्रों या औजारों ने मानव को प्राकृतिक पर्यावरण बदलने में सहायता दी।

पत्थर के औज़ार जो पाषाण युग की मानवीय क्रियाओं तथा तकनीक के सबसे प्राचीन उदाहरण हैं, अफ्रीका के विभिन्न भागों में पाए गए हैं। समय के साथ ये यंत्र तथा औज़ार अधिक परिष्कृत तथा प्रभावी बना दिए गए हैं।

आग की खोज सभ्यता के विकास में महत्त्वपूर्ण कदम था। आग की खोज के पश्चात आश्रय या आवास बनाना तथा कपड़ों का प्रयोग मानव जीवन का भाग बन गया। इसके पश्चात भूमि पर कृषि करने तथा पशु-पालन से मानव **नदी घाटी** सभ्यताओं की ओर अग्रसर हुआ।

पत्थर के औज़ारों से जेट तक

कृषि तथा पशु-पालन दोनों का ही प्राकृतिक पर्यावरण पर विशेष प्रभाव पड़ा। कई बार कृषि से किसी क्षेत्र की जैव-विविधता नष्ट हो जाती है। उत्खनन, औद्योगीकरण तथा कस्बों व नगरों के विकास का भी किसी क्षेत्र के प्राकृतिक पर्यावरण को बदलने में महत्त्वपूर्ण योगदान रहता है। प्रदूषण तथा पर्यावरण में भूमंडलीय परिवर्तन से हम आज बहुत चिंतित हैं, परंतु वह हमारे ही क्रियाकलापों की देन है।

बस्तियाँ

स्थाई गाँवों, कस्बों और नगरों के विकसित होने के क्या कारण हैं? जब तक मनुष्य ने भूमि से भोजन उत्पन्न करने की विधि नहीं खोजी थी तब तक स्थाई घरों या बस्तियों की

खेती की विभिन्न अवस्थाएँ

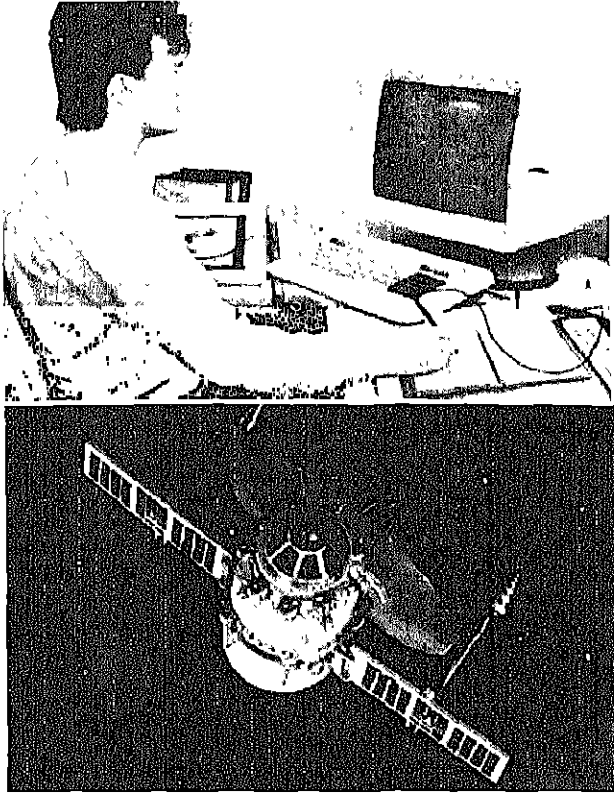
संकल्पना नहीं थी क्योंकि आखेट करने वाले या वस्तुएँ एकत्र करने वाले मानव समुदाय को भोजन की खोज में एक स्थान से दूसरे स्थान पर भटकना पड़ता था।

अतः खेती के आविष्कार से ही स्थाई बस्तियों का प्रारंभ हुआ। भूमि से भोजन पैदा करना सीखने के पश्चात ही मानव स्थाई स्थलों पर बस्तियाँ स्थापित कर सका। परंतु बस्तियों के लिए स्थाई स्थलों को चुनने में कुछ महत्त्वपूर्ण कारकों का योगदान था। कुछ स्थानों को दूसरे स्थानों की अपेक्षा क्यों वरीयता दी गई? ऐसी वरीयता के पीछे निश्चित रूप से **जल की उपलब्धता** सबसे महत्त्वपूर्ण और आधारभूत कारक था। पहले के समय में, जल के किसी स्रोत के निकट रहना बहुत ही महत्त्वपूर्ण समझा जाता था। जल के महत्त्व के कारण ही सारी प्राचीन सभ्यताएँ नदी घाटियों में ही विकसित हुई थीं। सिंधु घाटी सभ्यता ऐसा ही एक उदाहरण है। आज भी गाँवों, कस्बों या नगरों के विकास में जल के स्रोत विशेष महत्त्व रखते हैं। शुष्क क्षेत्रों में जल की ओर खिंचाव की शक्ति और भी अधिक होती है। जल के चारों ओर बढ़ने वाली बस्तियों को **आर्द्र-बिंदु** बस्तियाँ कहते हैं। कभी-कभी बस्तियाँ वहाँ भी विकसित होती हैं जहाँ परिवहन की सुविधाएँ अधिक अच्छी होती हैं। प्रमुख रेल मार्गों तथा सड़कों के किनारे भी बस्तियाँ विकसित होती हैं।

स्थलाकृति अथवा भूमि का स्वरूप भी बस्तियों के विकास में महत्त्वपूर्ण योगदान देता है। नदियों के विस्तृत मैदान कस्बों तथा नगरों के विकास के लिए सदैव अच्छे क्षेत्र रहे हैं। भारत के उत्तरी मैदान में उपयुक्त स्थलाकृति के कारण अनेक कस्बे व नगर विकसित हुए हैं। आप भारत के उत्तरी मैदान में स्थित दस नगरों की एक सूची बना सकते हैं। ऐसे मैदानों में परिवहन प्रणाली का विकास भी सरल होता है जिससे एक स्थान से दूसरे स्थान तक लोगों का आवागमन आसान हो जाता है। परंतु यदि स्थलाकृति बहुत ऊबड़-खाबड़ अर्थात ऊँची-नीची हो तो बस्तियाँ कम होंगी क्योंकि यहाँ भूमि की प्रकृति लोगों के आवागमन में बाधा उत्पन्न करती है। कभी-कभी पर्वतीय दर्रों के निकट का स्थान नगरों की स्थिति के लिए उत्तम माना जाता है। पाकिस्तान में पेशावर नगर की स्थिति महत्त्वपूर्ण है क्योंकि यह खैबर दर्रे के निकट स्थित है।

किसी स्थान का **प्राकृतिक** या **नैसर्गिक सौंदर्य** भी पर्यटन पर आधारित नगरों के विकास में महत्त्वपूर्ण योगदान देता है। प्राकृतिक सौंदर्य लोगों को आकर्षित करता है और ये नगर अवकाश या **छुट्टी बिताने के केंद्रों** के रूप में विकसित हो जाते हैं। हाल के वर्षों में, पर्यटन एक उद्योग बन गया है जो बड़ी संख्या में लोगों को व्यवसाय या नौकरी प्रदान करता है। हिमालय तथा भारत के समुद्र तटीय क्षेत्रों में ऐसे अनेक पर्यटन केंद्र विकसित हो गए हैं जहाँ प्राकृतिक सौंदर्य का आनंद लेने के लिए सारे संसार से लोग एकत्रित होते हैं। कश्मीर तथा गोवा ऐसे ही उदाहरण हैं जिन्हें आप सभी जानते हैं।

परिवहन एवं संचार

परिवहन एवं संचार तंत्र मानवीय पर्यावरण का एक महत्त्वपूर्ण अंग है। परिवहन तंत्र से लोगों

ई-मेल — सैटेलाइट

तथा वस्तुओं के एक स्थान से दूसरे स्थान तक पहुँचने में सहायता मिलती है और इससे लोगों की आर्थिक तथा सामाजिक क्रियाओं तथा उनके बीच सहसंबंधों पर भी प्रभाव पड़ता है। ऐसी अनेक बस्तियाँ हैं जिनका महत्त्व तथा प्रभाव उनके पड़ोस से कहीं अधिक दूर तक अनुभव किया जाता है। ऐसे नगरों के विकास के लिए परिवहन और संचार के साधन महत्त्वपूर्ण हैं। परिवहन के अच्छे साधन सुनिश्चित हो सकें तो ऐसे नगरों का अतिरिक्त उत्पादन दूर के बाज़ारों तक पहुँच सकता है और इस प्रक्रिया से इनका अधिक विकास हो सकता है। परिवहन की उत्तम सुविधाओं से वस्तुओं का आदान-प्रदान अधिक विस्तृत क्षेत्र में किया जा सकता है। ऐसे नगर शीघ्र ही सांस्कृतिक तथा वाणिज्यिक क्रियाकलापों के केंद्र बन जाते हैं। प्रमुख परिवहन मार्गों पर बसे नगरों के अतिरिक्त बंदरगाह एवं पोताश्रय वाले नगर भी ऐसी बस्तियों के उदाहरण हैं।

परिवहन का आधुनिकीकरण पशु-पालन तथा पहिए की खोज के साथ प्रारंभ हो गया था। परंतु अब परिवहन एवं संचार तंत्र का बहुत अधिक विकास हो चुका है। तकनीकी के विकास के साथ परिवहन के साधन भी बदलते रहे हैं। अब रेलमार्ग, जलमार्ग, सड़क तथा वायुमार्ग परिवहन के मुख्य साधन हैं।

सड़क परिवहन का विशेष महत्त्व है क्योंकि इससे घर के दरवाज़े तक सामान पहुँचाया जा सकता है। रेलमार्गों के निर्माण की अपेक्षा सड़कों का निर्माण सस्ता है। पर्वतीय क्षेत्रों में सड़क परिवहन विशेष महत्त्व का है क्योंकि ऊँची-नीची भूमि के कारण यहाँ रेलमार्ग बनाना कठिन होता है।

इसके बावजूद अधिक मात्रा में यात्री तथा सामान दोनों के परिवहन के लिए रेलमार्ग आवश्यक हैं। कोयले के इंजन से प्रारंभ होकर, रेलगाड़ियाँ अब डीज़ल तथा बिजली से चलाई जाती हैं। धरातल पर बने रेल-जाल के अतिरिक्त संसार भर के बड़े-बड़े नगरों में भूमिगत रेल सेवा भी बहुत महत्त्वपूर्ण हो गई है। क्या आप भारत के दो ऐसे नगरों के नाम बता सकते हैं जहाँ भूमिगत रेल या मेट्रो रेल सेवाएँ प्रारंभ की गई हैं?

जल परिवहन सबसे सस्ता परिवहन का साधन है। पुराने समय में नावों तथा जलयानों का प्रयोग होता था। अब हम बड़ी-बड़ी नावों, यांत्रिक नौकाओं तथा जलयानों का प्रयोग करते

हैं जो मशीनों से भली-भाँति युक्त हैं और अधिक तीव्र गति वाली हैं।

वायु परिवहन, परिवहन का तीव्रगामी साधन है परंतु यह महँगा भी बहुत है। पाइप लाइनें तथा बिजली की लाइनें परिवहन के अन्य साधन हैं जिनसे तेल, गैस या बिजली का वितरण होता है।

परिवहन के साधनों के अतिरिक्त, संचार तंत्र भी ज्ञान तथा विचारों के आदान-प्रदान के लिए बहुत महत्त्वपूर्ण बन गए हैं। संचार तंत्र व्यक्तिगत या जनसमूह स्तर पर हो सकता है। आजकल इंटरनेट द्वारा किसी एक कोने में बैठकर सारे संसार की जानकारी प्राप्त की जा सकती है। यह अब तक का सबसे सस्ता संचार माध्यम है। शिक्षण तथा जागरूकता संबंधी अभियानों को सर्वव्यापी बनाने में जनसंचार तंत्र बहुत महत्त्वपूर्ण है। रेडियो, टेलीविजन तथा समाचार-पत्र जनसंचार के सशक्त माध्यम हैं।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**
   (क) कृषि ने मानवीय बस्तियों को कैसे प्रभावित किया?
   (ख) मानवीय प्रक्रियाओं के प्राचीनतम चिह्न हमें कहाँ मिले?
   (ग) 'आर्द्र-बिंदु' बस्ती किसे कहते हैं?
   (घ) स्थलाकृति बस्तियों के विकास को कैसे प्रभावित करती है?
   (ङ) सड़क परिवहन के क्या लाभ हैं?

2. **रिक्त स्थानों की पूर्ति कीजिए**
   (क) पेशावर __________ दर्रे के निकट स्थित है।
   (ख) __________ का आविष्कार विकास की ओर एक महत्त्वपूर्ण कदम था।
   (ग) उत्तर भारत के मैदान में नगरों का विकास अनुकूल __________ के कारण हुआ।
   (घ) किसी स्थान का नैसर्गिक सौंदर्य __________ के विकास के लिए उत्तरदायी है।
   (ङ) __________ हमें किसी भी स्थान से पलभर में संपर्क करने में सहायक है।

3. **परियोजना कार्य**
   - भारत के रेखा मानचित्र में दिखाइए —
     प्रमुख रेल मार्ग, प्रमुख नदियाँ तथा दस प्रमुख नगर।

अध्याय 8

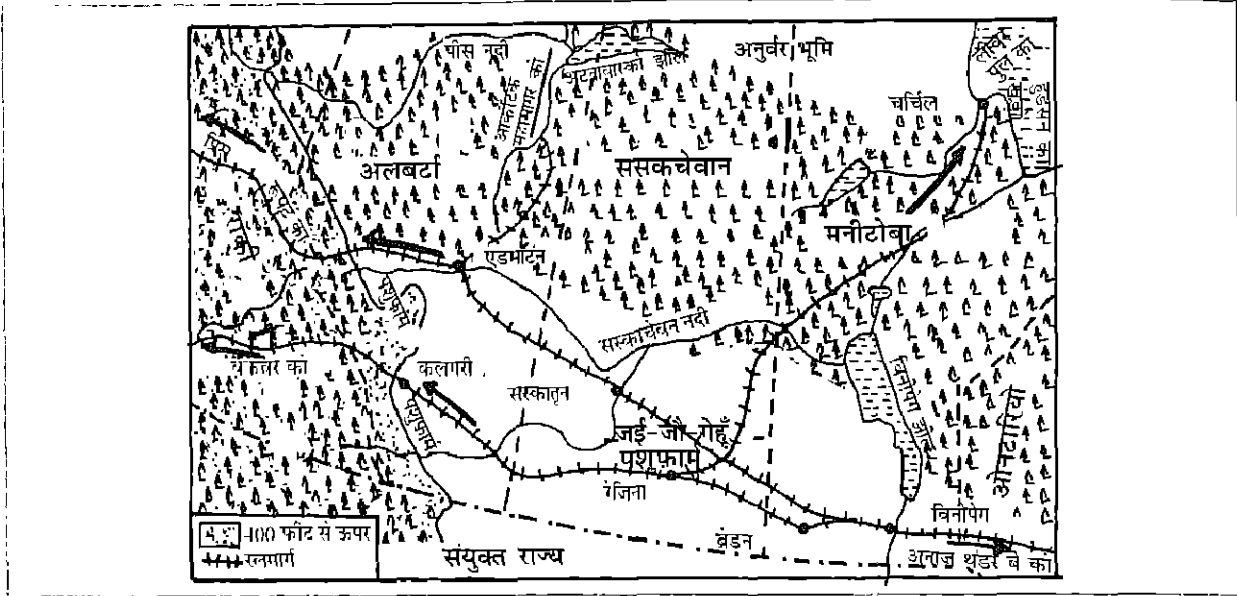
भूमि तथा लोग

इस अध्याय में हम कुछ विशिष्ट प्रदेशों और वहाँ रहने वाले लोगों के बारे में अध्ययन करेंगे।

प्रेयरी में जीवन

महाद्वीपों के आंतरिक भागों में रात और दिन के तापमान का अंतर प्रायः बहुत अधिक होता है। ऊँचे पर्वतों के न होने तथा महासागरीय प्रभावों से दूर होने के कारण यहाँ वर्षा बहुत कम होती है। ऐसी जलवायु दशाओं में यहाँ पाई जाने वाली सबसे महत्त्वपूर्ण प्राकृतिक वनस्पति घास है जिसकी लंबी जड़ें उसे कठोर जलवायु में भी जीवित रहने में सहायता करती हैं। क्या आप जानते हैं, कैसे? ये लंबी जड़ें मृदा में काफी गहराई तक चली जाती हैं और वहाँ से मृदा से आर्द्रता प्राप्त करती हैं, जो इन्हें जीवित रहने में सहायता करती हैं। विभिन्न देशों या महाद्वीपों में ये घास के मैदान विभिन्न नामों से पुकारे जाते हैं।

उत्तरी अमेरिका में प्रेयरी इसी प्रकार के घास के मैदानों वाले प्रदेश हैं। समुद्र तटीय क्षेत्रों से दूर ये विस्तृत घास के मैदान महाद्वीप के आंतरिक भाग में पाए जाते हैं। इसका मुख्य भाग संयुक्त राज्य अमेरिका में स्थित है तथा कुछ भाग कनाडा में भी है। अधिकांश भागों में प्रेयरी वृक्ष-रहित हैं परंतु निचले मैदानों के निकट, नदी घाटियों के साथ-साथ यहाँ वन भी पाए जाते हैं। आप यह जानने का प्रयास कर सकते हैं कि इसके पीछे क्या कारण हैं। दो मीटर तक ऊँची घास यहाँ के भू-दृश्य की प्रधानता है।

जब से लोग प्रेयरी में बसने के लिए आए, मानवीय क्रियाओं से यहाँ के भू-दृश्य में बहुत अधिक परिवर्तन आ गया है। पूर्वी कनाडा तथा ब्रिटिश द्वीपों से लोग यहाँ बसने के लिए आए। इन लोगों ने घास के क्षेत्रों को कृषि के लिए साफ़ करना प्रारंभ कर दिया। 1885 में **कनाडियन पैसिफ़िक रेलवे मार्ग** बन जाने से प्रेयरी के प्रवेश द्वार वस्तुतः खुल गए। अन्य रेलवे लाइनों के निर्माण ने इस क्षेत्र को लोगों के लिए और आकर्षक बना दिया। सैकड़ों की संख्या में लोग यहाँ बसने के लिए आने लगे। यहाँ की बस्तियों का रेलवे लाइनों के विकास से घनिष्ठ संबंध है। आज भी यहाँ के अधिकांश

उत्तर अमेरिका में स्थित प्रेयरी

निवासी मुख्य रेलवे लाइन के दोनों ओर 25 किमी के भीतर रहते हैं। आप जानते ही हैं कि भारत में प्राचीन नगरों को बहुत समय के बाद रेलवे लाइनों से जोड़ा गया था। परंतु प्रेयरियों में यह प्रक्रिया विपरीत है। वहाँ पहले रेलवे लाइनें बिछाई गई थीं और उसके पश्चात नगर विकसित हुए।

पश्चिमी भागों में जलवायु अधिक शुष्क है। पशुचारण यहाँ का मुख्य व्यवसाय है। रॉकी पर्वतों के गिरिपाद प्रदेशों में **पशुशालाएँ** (रैंच) पाई जाती हैं। इन पशुशालाओं में जंगली भैंसों, हिरनों, बारहसिंघों तथा मुर्गों के अतिरिक्त सबसे महत्त्वपूर्ण पशु गाय-बैल हैं। जाड़ों में पश्चिम की ओर से शुष्क गर्म पवन चलती है, जिससे बर्फ़ पिघलती है। ग्रीष्म तथा हेमंत ऋतु में ये गरम हवाएँ घास को सूखी घास में बदल देती हैं जो पशुओं का मुख्य भोजन है। आपने अमेरिका के प्रेयरियों के **काओबॉयज़** के बारे में पुरानी कहानियों में अवश्य सुना होगा।

काओबॉय

गेहूँ यहाँ की मुख्य फसल है। यहाँ के खेत या फ़ार्म बहुत बड़े-बड़े हैं, परंतु वे अलग-अलग नहीं होते। इन फ़ार्मों में आधुनिक मशीनें लगी हैं और रेडियो, टेलीफ़ोन, टेलीविजन तथा इंटरनेट आदि संचार-साधनों की सुविधाएँ भी हैं।

यद्यपि गेहूँ मुख्य फसल है तथापि जौ और जई भी उगाए जाते हैं। गेहूँ वसंत ऋतु में बोया जाता है। वसंत ऋतु के अंत की फुहारें तथा गरमी की चमकीली धूप गेहूँ के शीघ्र बढ़ने में सहायक होती है। अगस्त के महीने में

फसल कटने के लिए तैयार हो जाती है। फसल काटने तथा अनाज निकालने के लिए मशीनों का प्रयोग होता है। इन मशीनों को **कंबाइन** कहते हैं। अनाज को विभिन्न मंडियों में भेजने के लिए रेल गाड़ियों का प्रयोग किया जाता है।

फ़ार्मों में रहने वाले लोग मज़बूत काठी के तथा बहुत परिश्रमी काओबॉय (चरवाहे) होते हैं। केवल शीत ऋतु को छोड़ कर वे खेतों में सारा वर्ष कठिन परिश्रम करते हैं। यहाँ कस्बे और नगर नदियों के किनारे विकसित हो गए हैं। नगर अब रेलवे जंक्शन बन गए हैं। अब आप समझ गए होंगे कि परिवहन तथा संचार साधनों की बस्तियों के विकास में कितनी महत्त्वपूर्ण भूमिका होती है। **विनिपेग** एक ऐसा ही महत्त्वपूर्ण नगर है। इसे 'कनाडा के प्रेयरियों का प्रवेश द्वार' कहते हैं। संयुक्त राज्य अमेरिका के प्रेयरियों में स्थित कुछ महत्त्वपूर्ण नगर ज्ञात कीजिए।

1885 से 1915 ई. के बीच बहुत से लोग इस क्षेत्र में बसने के लिए आए। नए फ़ार्म बनाए गए और कृषि तथा पशुचारण विस्तृत क्षेत्र पर किया जाने लगा। ये क्रियाएँ घास के मैदानों को साफ़ करके की गईं। घास के मैदान, परिवहन के साधनों तथा नगरों के लिए भी साफ़ किए गए। परिणामस्वरूप, इस क्षेत्र में मृदा अपरदन तथा भयंकर सूखा पड़ने लगा। पवन अपरदन की क्रिया काफ़ी सक्रिय होने के कारण, मृदा की ऊपरी परत से जीवांश (ह्यूमस), चिकनी मिट्टी तथा गाद इस क्षेत्र से उड़ गए। परिणामस्वरूप फसलों का उत्पादन कम हो गया। इस स्थिति से निपटने के लिए, केंद्रीय सरकार तथा राज्य सरकारों ने सयुंक्त रूप से मृदा संरक्षण के लिए प्रयास किए हैं। प्रेयरियों को बचाने के लिए ऊँची घास लगाई गई है और पशुचारण का नियंत्रित किया गया है।

क्या आप जानते हैं?

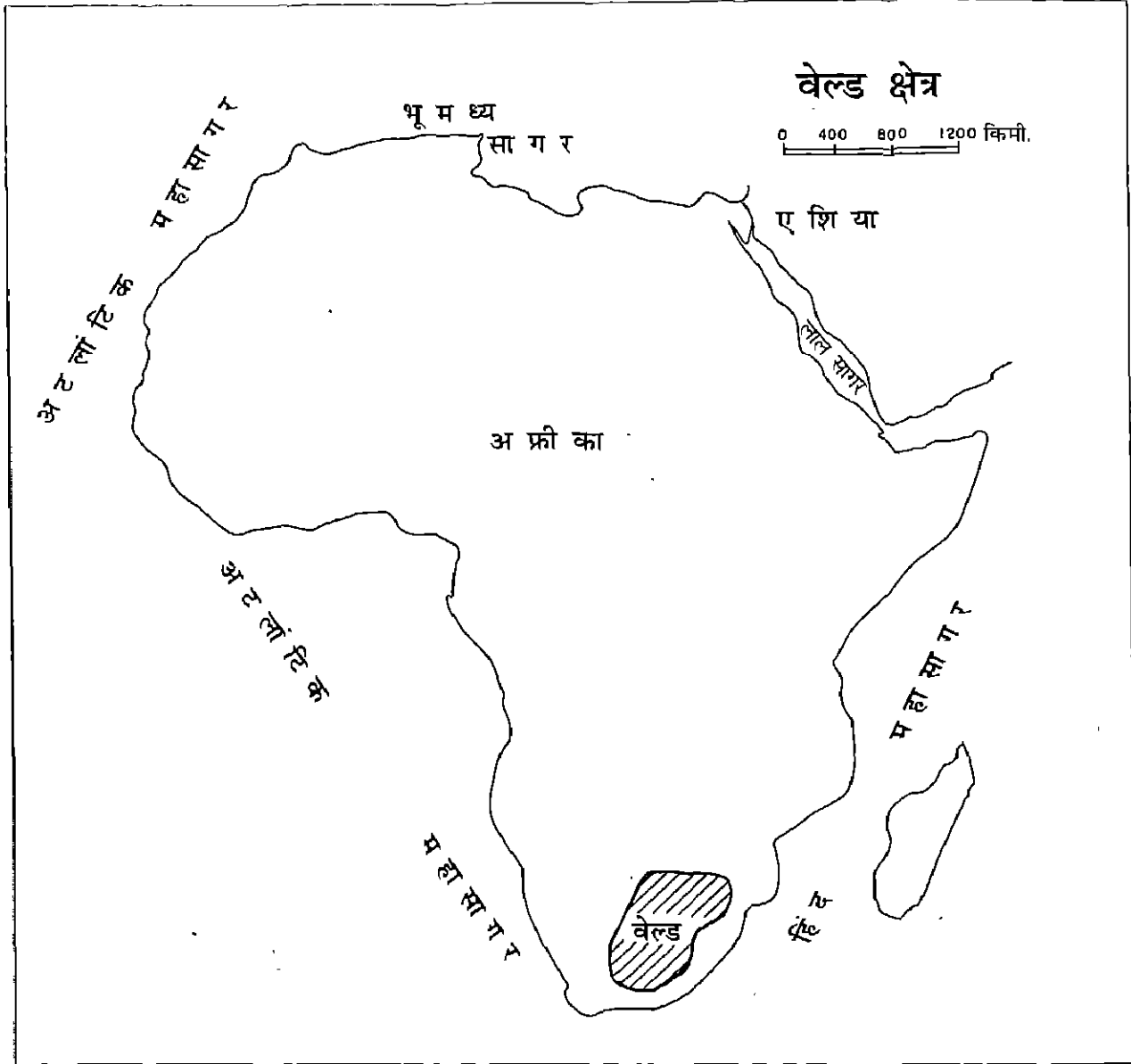
प्रेयरियों के ये घास के मैदान अमेरिकी इंडियन लोगों (जिन्हें आमतौर से 'ब्लैकफुट इंडियन' कहते थे) का निवास स्थल रहे हैं। प्रेयरी अन्य आदिवासियों जैसे आपचे, क्रो, क्री तथा पेवनी के भी निवास स्थल रहे थे।

यूरोपीय लोगों के आने से पहले ब्लैकफुट इंडियन पूर्णतया आखेट तथा भोजन संग्रह करने वाली जातियाँ थीं। घास के मैदानों, भैंसों तथा इंडियन तीनों में बहुत निकट संबंध रहे हैं।

उत्तरी अमेरिका के वनस्पति मानचित्र में प्रेयरी घास के मैदानों का विस्तार ध्यान से देखिए।

वेल्ड में जीवन

वेल्ड दक्षिण अफ्रीका का एक विस्तृत घास का मैदान है। यह दक्षिण अफ्रीका के पठार के पूर्वी भाग में स्थित है। इसके अंतर्गत, केप कालोनी का पूर्वी भाग, संपूर्ण ऑरेंज फ्री स्टेट तथा ट्रांसवाल का अधिक भाग सम्मिलित है। जैसे-जैसे हम पूरब से पश्चिम की ओर तथा समुद्र से दूर जाते हैं, जलवायु शुष्क होती जाती है। समुद्र तट से दूरी का अभिप्राय है --- वर्षा का कम होना क्योंकि ज्यों-ज्यों समुद्र से आने वाली आर्द्र पवनें सुदूर आंतरिक भागों में पहुँचती हैं, उनकी आर्द्रता कम होती जाती है। यह जलवायु वृक्षों के लिए बहुत शुष्क होती है। घास यहाँ की प्राकृतिक वनस्पति है। पश्चिम की ओर आगे जाने पर यह घास के मैदान मरुस्थल में विलीन हो जाते हैं।

उच्च पठारीय भाग, उच्च वेल्ड कहलाता है जो 1120 मीटर से 1670 मीटर तक ऊँचा

अफ्रीका में वेल्ड

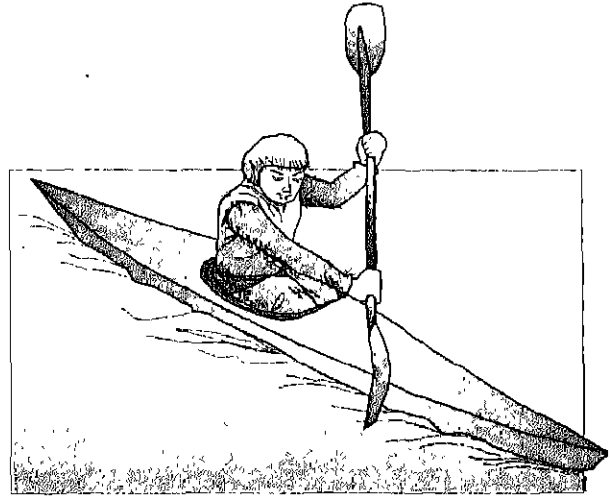
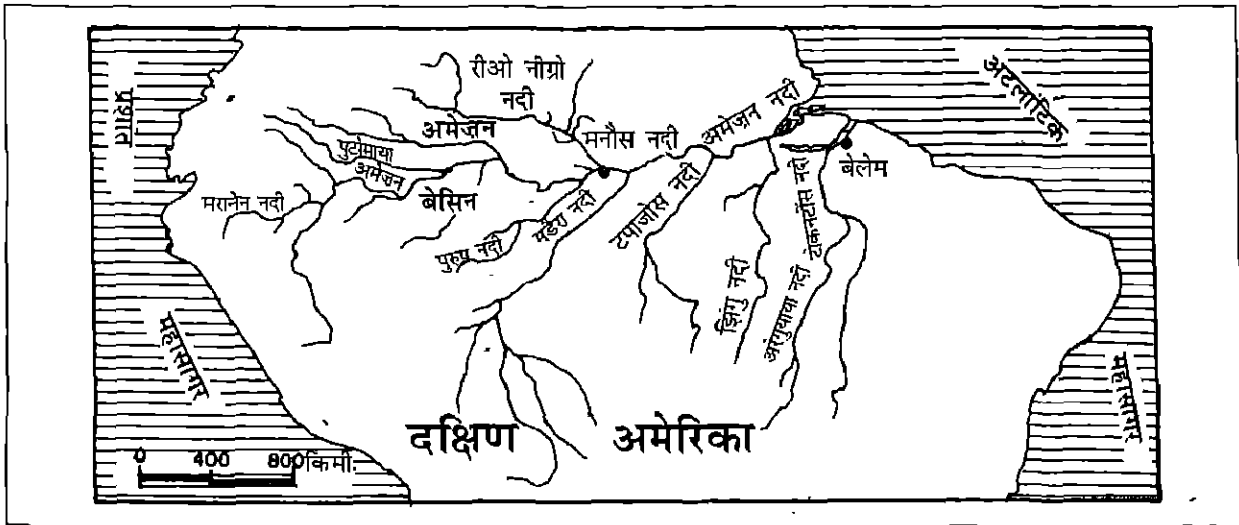
है। 610 मीटर से 1120 मीटर तक ऊँचाई वाला पठारीय भाग मध्य वेल्ड कहलाता है, जिससे नीचे का भाग निम्न या निचला वेल्ड कहलाता है। उच्च वेल्ड के मध्य एक पर्वत श्रेणी है जो क्षेत्रों के बीच जलविभाजक का कार्य करती है। यहाँ ज़ाबेज़ी लिमपोपो तथा साबी नदियाँ ढाल पर से नीचे की ओर बहती हैं तथा जलप्रपात व क्षिप्तिकाएँ बनाती हैं।

यहाँ पैदा की जाने वाली मुख्य खाद्य फसल मक्का है। यहाँ से मक्का बड़ी मात्रा में निर्यात किया जाता है। इस क्षेत्र को मक्का का त्रिभुज कहते हैं। प्राकृतिक वनस्पति प्रदर्शित किए जाने वाले दक्षिण अफ्रीका के मानचित्र में आप वेल्ड की स्थिति देख सकते हैं। कुछ

स्थानों, विशेषकर आर्द्र क्षेत्रों में, मक्का प्राकृतिक रूप से पैदा किया जाता है। इन क्षेत्रों में पशु-पालन भी एक महत्त्वपूर्ण व्यवसाय है। परंतु वेल्ड क्षेत्र में सबसे महत्त्वपूर्ण व्यवसाय भेड़-पालन है। पहले समय में भेड़ों की ऊन का निर्यात इंग्लैंड को किया जाता था। अब इस क्षेत्र में अपना ऊनी उद्योग विकसित हो गया है। वेल्ड के कुछ भाग खनिजों में भी धनी है। जोहांसबर्ग के निकट सोने और कोयले का उत्खनन किया जाता है। किंबरले की प्रसिद्ध हीरे की खानें वेल्ड की पश्चिमी सीमा पर हैं। उत्तर की ओर वेल्ड का ढाल धीरे-धीरे घटते हुए लिमपोपो नदी से मिल जाता है। ऊँचे भागों की अपेक्षा यह ढाल अधिक गरम होते हैं। सीमांत क्षेत्रों में मक्का, फल, कपास व तंबाकू महत्त्वपूर्ण फसलें हैं।

वेल्ड संसाधनों में धनी है। अतः कृषि तथा खनिज आधारित उद्योगों के कारण नगरों का विकास हुआ है। उदाहरणस्वरूप, प्रेटोरिया एक महत्त्वपूर्ण नगर है जो लोहा, इस्पात, रेलवे तथा औषधि उद्योगों के लिए विख्यात है। इस औद्योगिक विकास के कारण घास के मैदानों का विस्तार काफ़ी कम हो गया है और इससे यहाँ का प्राकृतिक पर्यावरण प्रभावित हुआ है।

अमेज़न घाटी में जीवन

नील नदी के बाद अमेज़न संसार की दूसरी सबसे लंबी नदी है। परंतु यदि हम जल के आकार तथा आयतन का विचार करें, तो अमेज़न संसार की सबसे बड़ी नदी है। यह एंडीज़ पर्वतों से हिम तथा वर्षा का जल बहाकर

केनो

अमेज़न घाटी

अटलांटिक महासागर में ले जाती है। अमेज़न बेसिन में संसार का 20 प्रतिशत ताज़ा पानी (मीठा जल) पाया जाता है। इस नदी का प्रवाह बहुत शक्तिशाली है।

फ्रांसिस्को डी ओरेलाना अमेज़न नदी की पूरी लंबाई में यात्रा करने वाला पहला यूरोपीय था। अपने मार्ग में वह एक ऐसी जनजाति के बीच फँस गया जिसकी महिलाएँ भीषण युद्ध करती थीं। ओरेलाना को एक पुरानी यूनानी किंवदंती याद आई जो महिला योद्धाओं के बारे में थी और उसने इस नदी का नाम 'अमेज़ोनास' रखा।

इस क्षेत्र के आदिवासी मुख्यत: नदी के किनारे रहते थे क्योंकि इससे उन्हें पीने का पानी तथा परिवहन की सुविधा मिलती थी। परिवहन के लिए केनो का प्रयोग किया जाता था, जो वृक्ष के तने से बनी डोंगी अथवा एक संकरी नाव होती थी। आज आदिवासी लोग बहुत कम संख्या में रह गए हैं।

अमेज़न घाटी वर्षा-वनों का क्षेत्र है। यह ऐसे विविध पौधों तथा जीवों की आश्रयस्थली है जो पृथ्वी पर दुर्लभ हैं। यहाँ 20 लाख कीटों, हज़ारों मछलियों तथा दो सौ स्तनपाई जीवों की प्रजातियाँ मिलती हैं। यह क्षेत्र खनिजों में भी धनी है। यहाँ बॉक्साइट, खनिज तेल, निकेल, ताँबे तथा टिन का उत्खनन होता है। सघन जंगलों से प्राप्त लकड़ी पर आधारित उद्योग प्रारंभ किए गए हैं।

आपको यह जानकर संभवत: आश्चर्य होगा कि आदिम जातियाँ यहाँ हज़ारों वर्षों से रह रही हैं। वे आखेट करती थीं, मछली पकड़ती थीं तथा छोटे-छोटे खेतों में फसलें उगाया करती थीं। वे यह कार्य अपनी जीविका के लिए करती थीं, व्यापार के लिए नहीं। वे स्थानांतरी कृषि करती थीं। मैनिओक यहाँ की महत्त्वपूर्ण खाद्य की फ़सल है।

हाल के वर्षों में, अमेज़न घाटी में जीवन नाटकीय ढंग से बदल गया है। कोलंबस द्वारा नई दुनिया की खोज के पश्चात से अनेक यूरोप निवासी दक्षिणी अमेरिका आकर बस गए हैं। पिछले कुछ दशकों में और अधिक लोग इस क्षेत्र में आकर बस रहे हैं। माँग बढ़ने के कारण पौधों और जीवों की अनेक प्रजातियाँ नष्ट हो गई हैं। अब कृषक बड़े-बड़े फ़ार्म चाहते हैं ताकि वे बिक्री के लिए फसलें उगा सकें। अब कॉफ़ी, मक्का व कोको यहाँ की मुख्य फसलें हैं। परंतु इनके अधिकांश भाग का विनाश अत्यंत चिंता का विषय है। अमेज़न घाटी में वृक्षों के विनाश के दूरगामी व बुरे परिणाम हो सकते हैं। यदि कार्बन-डाइऑक्साइड का स्तर बढ़ जाता है, तो इससे भूमंडलीय ऊष्मा बढ़ जाने से भयंकर दुष्परिणाम होंगे। अमेज़न नदी घाटी के ये वर्षा-वन सारी पृथ्वी के लिए महत्त्वपूर्ण संसाधन हैं। परंतु हम इसे अपनी क्रियाओं द्वारा नष्ट कर रहे हैं। जो लोग यहाँ बसना चाहते हैं वे नगर बसाने तथा पशुचारण के लिए वनों को साफ़ कर रहे हैं। खनिजों का उत्खनन भी वनों को नष्ट कर रहा है। लगभग एक सौ वर्षों में हमने इस अनोखे वन का एक बड़ा भाग नष्ट कर दिया है।

क्या आप जानते हैं?

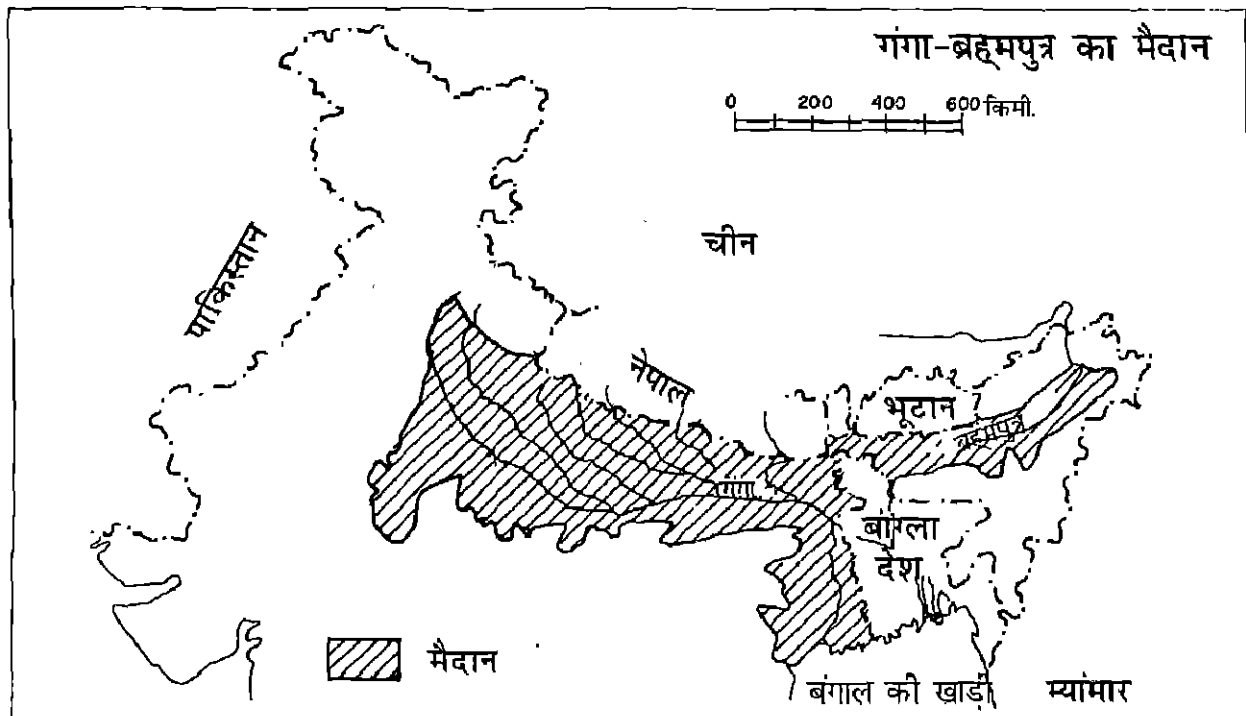
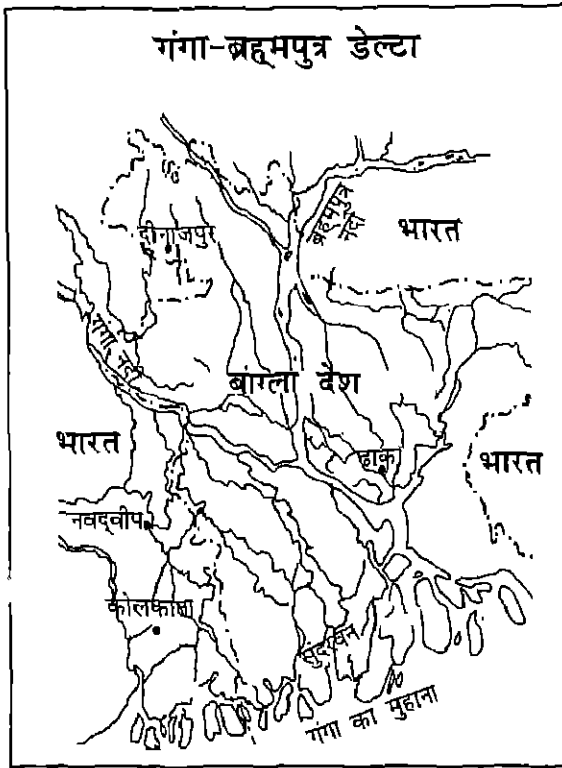
स्थानांतरी कृषि (**काटने और जलाने की विधि**) में कृषक वृक्ष तथा झाड़ियों को काट कर और उन्हें जला कर अपनी भूमि साफ़ करते हैं। मृदा में मिली राख भूमि को उपजाऊ बना देती है। इन खेतों में कुछ वर्षों तक फसलें उगाते हैं फिर दूसरे स्थान पर चले जाते हैं। छोड़े हुए खेत में ये पेड़ लगा देते हैं।

गंगा-ब्रह्मपुत्र मैदान में जीवन

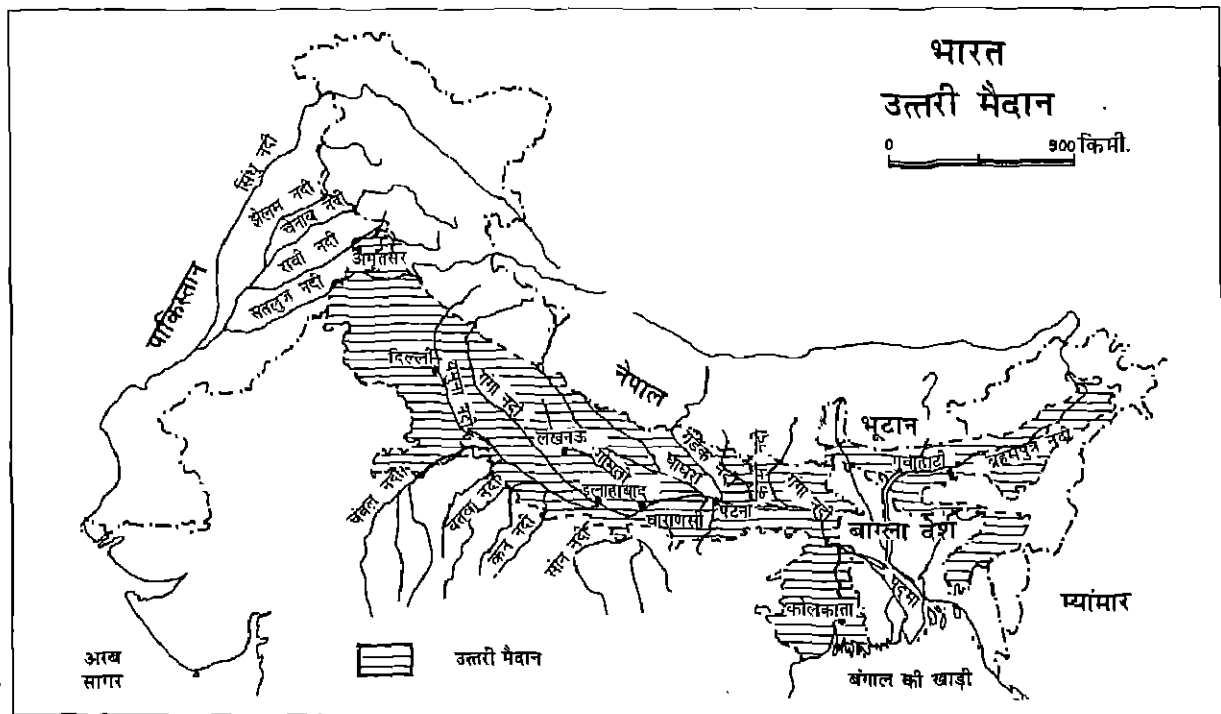
हिमालय के दक्षिण में नदियों द्वारा निर्मित एक विशाल मैदान 2500 किलोमीटर से अधिक दूरी तक विस्तृत है। यह मैदान तीन नदियों — सिंधु, गंगा तथा ब्रह्मपुत्र द्वारा निर्मित है। यह उपजाऊ मैदान एक ऐसे प्रदेश के रूप में महत्त्वपूर्ण रहा है जहाँ लोगों ने बसना उचित समझा। यहाँ की उपजाऊ मिट्टी, जल की उपलब्धता तथा परिवहन की सुगमता के कारण इस मैदान में अनेक शहरों एवं नगरों का विकास हुआ है।

इस विस्तृत मैदान के निर्माण के लिए दो नदी-तंत्र उत्तरदायी हैं — सिंधु नदी तंत्र तथा गंगा-ब्रह्मपुत्र नदी तंत्र। गंगा का मैदान मुख्यतया उत्तर प्रदेश, बिहार तथा पश्चिमी बंगाल के राज्यों में है, जबकि ब्रह्मपुत्र का मैदान मुख्यतया असम में स्थित है। इस मैदान में उच्चावच लक्षणों में बहुत विविधता नहीं है। परंतु नदियों ने अपने अपरदन एवं निक्षेपों द्वारा प्राकृतिक तटबंधों, विसर्पों, गोखुर झीलों तथा डेल्टाओं का निर्माण किया है। निचले भागों में इन नदियों ने संसार का सबसे बड़ा डेल्टा बनाया है।

इन दो नदियों ने हज़ारों वर्षों से जलोढ़ मिट्टी जमा करके इन मैदानों को बहुत उपजाऊ बना दिया है। अनादि काल से इस उपजाऊ मैदान ने लोगों को यहाँ बसने के लिए आकर्षित किया है। जल की पर्याप्त आपूर्ति, परिवहन की सुविधा तथा उपयुक्त जलवायु ने इस आकर्षण में और वृद्धि की है। भारत की राजधानी दिल्ली इसी मैदान में स्थित है।

गंगा-ब्रह्मपुत्र का मैदान भारत का एक बहुत महत्त्वपूर्ण कृषि-प्रदेश है। चावल, गेहूँ, गन्ना,

तिलहन, चना, जूट और चाय यहाँ की महत्त्वपूर्ण फसलें हैं। पूर्वकाल में कृषक अपनी फसलों के लिए मानसूनी वर्षा पर निर्भर रहते थे। परंतु हाल के वर्षों में किसानों को सिंचाई की सुविधाएँ प्रदान की गई हैं। अब उसी खेत में दो से तीन फसलें प्रतिवर्ष उगाई जाती हैं।

अनेक प्रकार की सब्ज़ियों के अतिरिक्त चावल लोगों का मुख्य भोजन है। इस मैदान के पूर्वी भाग में जनसाधारण के भोजन में मछलियाँ भी भोजन का महत्त्वपूर्ण अंग होती हैं।

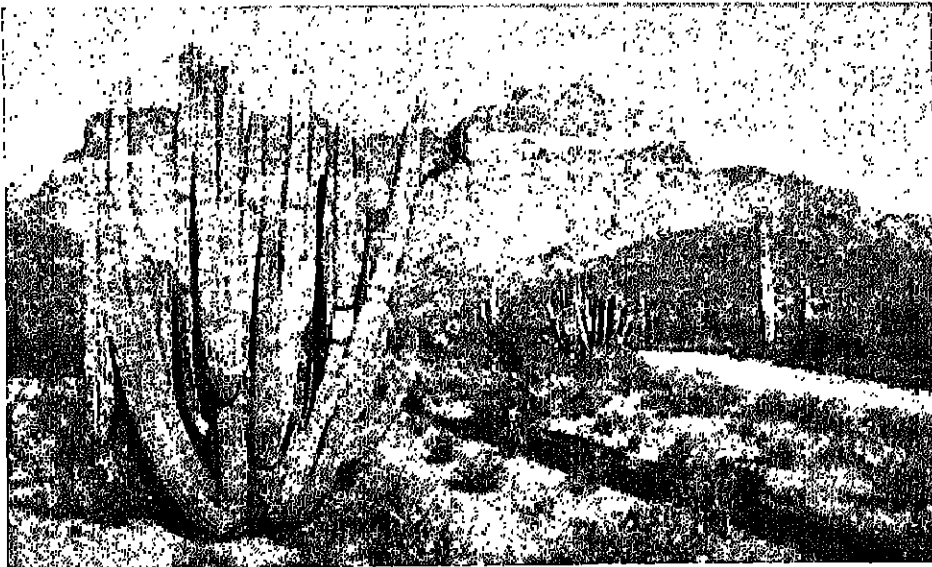
यद्यपि यह मैदान मूल रूप से एक कृषि-क्षेत्र रहा है तथापि कुछ ही वर्षों में इसमें अनेक कृषि आधारित उद्योगों की स्थापना हुई है। तीव्र गति से बढ़ती जनसंख्या के कारण यह विस्तृत मैदान अधिक नगरों की स्थापना और परिवहन तंत्र बिछाने के लिए प्रयोग होने लगा है।

उत्तरी मैदान के महत्त्वपूर्ण नगर तथा शहर

यहाँ पर अनेक शहर तथा नगर स्थित हैं। प्राचीन नगर वाराणसी गंगा के तट पर स्थित है। अन्य सैकड़ों नगरों में हरिद्वार, इलाहाबाद, पटना, कोलकाता, तेजपुर, दिसपुर कुछ मुख्य नगर हैं। आप इस मैदान में स्थित बीस बड़े नगरों की सूची बनाकर उन्हें भारत के एक मानचित्र में प्रदर्शित कर सकते हैं।

पिछले पाँच दशकों में नगरों के विकास, फ़ार्मों के विस्तार तथा परिवहन तंत्र के विकास ने यहाँ के भू-दृश्य को परिवर्तित किया है। नदियों का जल कृषि क्षेत्र तथा उद्योगों द्वारा प्रदूषित किया जा रहा है। नगरों की मल-जल व्यवस्था भी नदियों को प्रदूषित कर रही है जो चिंता का मुद्दा बन गया है। गंगा इतनी अधिक प्रदूषित हो गई है कि नदी को बचाने के लिए 'गंगा कार्य योजना' प्रारंभ की गई है। अपने अध्यापक के सहयोग से 'गंगा कार्य योजना' के संबंध में आप कुछ सूचनाएँ एकत्र कर सकते हैं।

मरुस्थल में जीवन

हमारे ग्रह पर कुछ ऐसे क्षेत्र हैं जहाँ वनस्पति जीवन के लिए पर्याप्त वर्षा नहीं है। दिन-रात के तापमान के बीच अंतर अधिक है। दिन धूप वाले तथा गरम होते हैं जबकि रातें बहुत ठंडी होती हैं। हो सकता है कि ऐसे कुछ स्थानों में पिछले अनेक वर्षों में बिल्कुल वर्षा न हुई हो। जब वर्षा होती है तब इसके साथ तेज़ हवाएँ या तूफ़ान आते हैं। ऐसे गरम तथा शुष्क भू-दृश्यों को, जो वनस्पति रहित होते हैं मरुस्थल कहते हैं। संसार के धरातल का लगभग सातवाँ भाग मरुस्थलों द्वारा घिरा हुआ है।

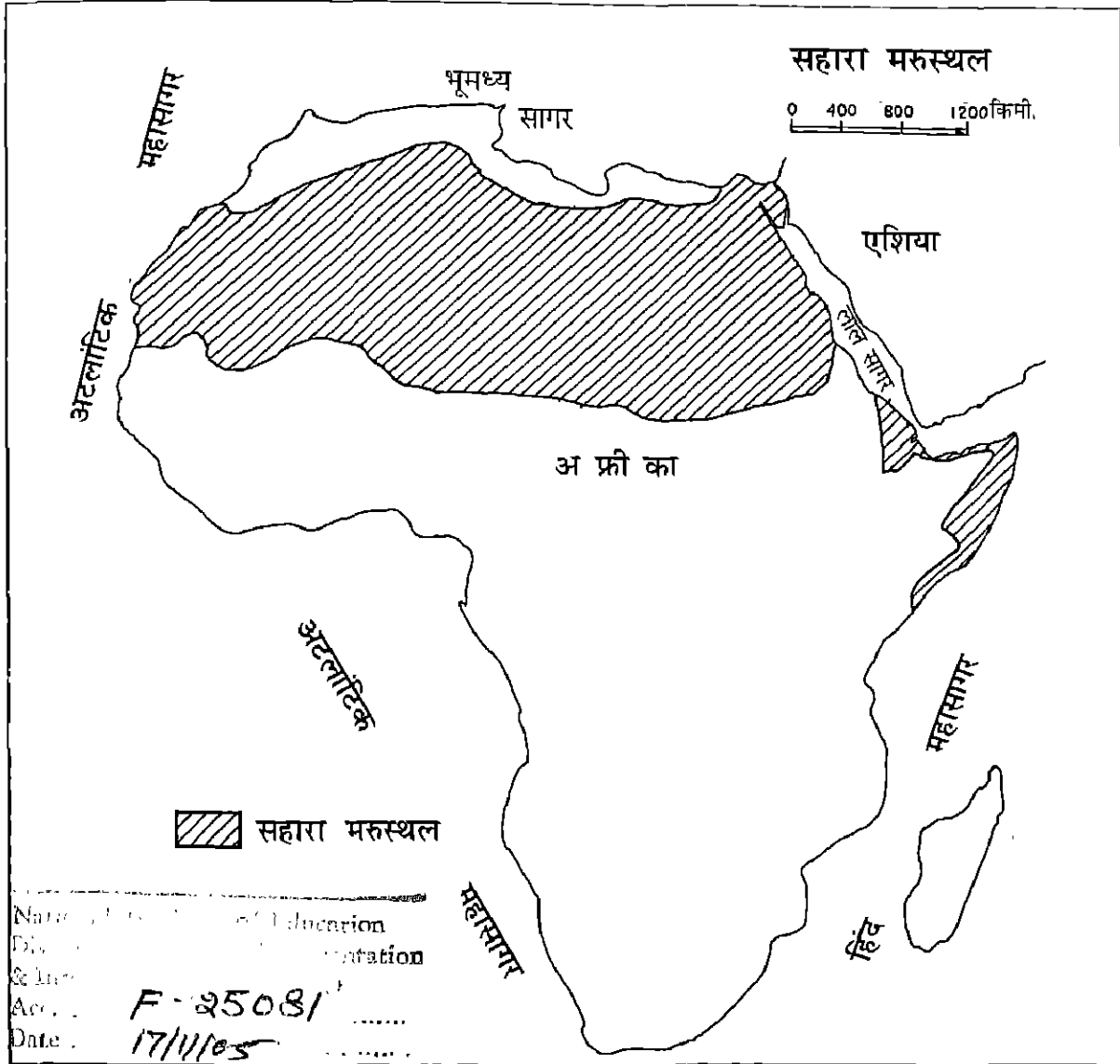
मरुस्थल दो प्रकार के हो सकते हैं-गरम मरुस्थल जैसा बताया गया है तथा ठंडे मरुस्थल। उच्च अक्षांशों तथा ऊँचे-ऊँचे पर्वतों में वृक्ष विहीन तथा हिमाच्छादित विस्तृत भू-भाग पाए जाते हैं जिन्हें ठंडे मरुस्थल कहते हैं। यहाँ हम गरम मरुस्थल **सहारा** तथा ठंडे मरुस्थल **लद्दाख** के बारे में जानकारी प्राप्त करेंगे।

मरुस्थलीय वनस्पति

बालू का टिब्बा

सहारा - विशालतम गरम मरुस्थल

सहारा संसार का सबसे बड़ा गरम मरुस्थल है। यह लाल सागर से अटलांटिक महासागर तक अफ्रीका के उत्तरी भाग में फैला हुआ है। यदि हम अफ्रीका का मानचित्र ध्यान से देखें तो ज्ञात होगा कि इस महाद्वीप के उत्तरी भाग में भू-भाग अधिक है। दक्षिण की ओर महाद्वीप संकरा होता जाता है। इस प्रकार हम समझ सकते हैं कि इस महाद्वीप का एक बड़ा भाग बालू से ढका हुआ है। इस भू-दृश्य की सबसे प्रमुख आकृति बालू के टिब्बे हैं। जब तेज़ हवाएँ चलती हैं और इनके मार्ग में अवरोध आते हैं, तब इनके साथ उड़कर आने वाली बालू का निक्षेपण हो जाता है जिसे बालू के टिब्बे कहते हैं। सहारा मरुस्थल का एक बड़ा भाग गतिशील या अस्थिर **बालू के टिब्बों** द्वारा बना हुआ है।

वर्ष के अधिक भाग में सहारा में बहुत अधिक तापमान पाया जाता है। परंतु सबसे गर्म महीने जून, जुलाई तथा अगस्त हैं। कुछ स्थानों में जहाँ जल धरातल के निकट मिलता है, खजूर के अतिरिक्त झाड़ियाँ तथा काँटेदार पौधे जैसे कैक्टस उगते हैं। सहारा तथा अरब के मरुस्थलों में खजूर के वृक्ष काफ़ी पाए जाते हैं। इनके फल अर्थात खजूर पकने पर भूरे हो जाते हैं। मनुष्य तथा पशु दोनों खजूर खाते हैं। इसके पत्ते चारे या ईंधन के रूप में उपयोग में लाए जाते हैं। कभी-कभी ये पत्ते छत ढकने के लिए भी प्रयोग किए जाते हैं। यह वृक्ष बहुत ही उपयोगी होता है। इस वृक्ष का रस मदिरा बनाने के काम में आता है। खजूर की छाया में अंजीर, जैतून, खूबानी जैसे फलों के पौधे भी उगाए जाते हैं।

इसलिए यह सामान्य धारणा कि मरुस्थल जीवन विहीन भू-दृश्य है, पूर्ण सत्य नहीं है। परंतु जीवन के लिए जल बहुत महत्त्वपूर्ण तत्त्व है। यहाँ हमें मरुस्थल की भू-आकृतियों तथा जल की उपलब्धता के बीच बहुत सुंदर संबंध देखने को मिलता है। ऊँचे क्षेत्रों या तेज़ ढालों पर जल एकत्र नहीं होता। इसलिए वहाँ पौधे तथा जानवर बहुत ही कम मिलते हैं, परंतु निचले क्षेत्रों में पौधे तथा जानवर मिल जाते हैं।

अफ्रीका में सहारा की स्थिति

पौधे तथा जीव गरम मरुस्थल के प्राकृतिक पर्यावरण के साथ अनुकूलन के अनेक लक्षण प्रदर्शित करते हैं। उदाहरणस्वरूप पौधों में लंबी तथा विस्तृत जड़ें विकसित होती हैं जिससे धरातलीय मृदा के नीचे से जल खींच सकें। प्राय: इन पौधों की पत्तियाँ छोटी होती हैं जिससे वाष्पोत्सर्जन द्वारा इनके जल का ह्रास कम हो।

इसी प्रकार, मानव बस्तियाँ **मरुद्यानों** में पाई जाती हैं क्योंकि वहाँ जल उपलब्ध रहता है। कुछ मरुद्यान बहुत छोटे होते हैं जहाँ खजूर के वृक्ष एक कुएँ के चारों ओर झुंडों में पाए जाते हैं। परंतु कुछ काफ़ी बड़े होते हैं जहाँ कृषि भी की जाती है। ऐसे खेतों में गेहूँ, मक्का, मोटे अनाज, फलियाँ,

प्याज़, तंबाकू व शकरकंदी उगाई जाती हैं। लोग मोटी दीवारों वाले आवास बनाते हैं जिनमें छोटी खिड़कियाँ होती हैं जिससे गर्मी भीतर न आ सके। उदाहरणस्वरूप, ट्यूनीशिया में लोगों ने नरम चट्टानों में अपने व अपने पशुओं के लिए गुफाएँ बना रखी हैं। गर्मी से बचने के लिए ढीले सफ़ेद वस्त्र पहने जाते हैं। लंबी दूरी की यात्रा के लिए लोग अपने साथ बकरी की खाल या ऊँट की खाल से बनी बोतलों में पानी ले जाते हैं जिससे पानी ठंडा बना रहे।

क्या आप जानते हैं?

यह जानकर आपको आश्चर्य होगा कि जहाँ अब सहारा है, वहाँ कभी एक पूर्णतया हरा-भरा मैदान था। यह एक संघन बसा क्षेत्र था। सहारा की गुफ़ाओं से प्राप्त चित्रों से ज्ञात होता है कि यहाँ नदियाँ तथा घड़ियाल पाए जाते थे। हाथी, शेर, जिराफ़, शुतुरमुर्ग, भेड़, पशु तथा बकरियाँ सामान्य जानवर थे। परंतु यहाँ की जलवायु बहुत गरम व शुष्क जलवायु में बदल गई है जैसा कि आज हम देखते हैं।

मरुस्थल की कठोर जलवायु से सामंजस्य रखने वाला सबसे महत्त्वपूर्ण पशु ऊँट है। ऊँटों के मुलायम तलवे वाले पैर उन्हें बिखरी बालू में धँसने से बचाते हैं और उनकी आँखों की लंबी पलकें उनकी आँखों को बालू से बचाती हैं। उनकी पीठ का कूबड़ पानी को लंबे समय तक इकट्ठा रखने में सहायक होता है जिससे वे मरुस्थल में लंबी यात्राओं में भी जीवित रह सकते हैं। इसलिए ऊँट को '**मरुस्थल का जहाज़**' कहना उचित है।

क्या आप जानते हैं?

विश्वास किया जाता है कि फ़ाहियान सबसे पहले आने वाले चीनी यात्रियों में से एक था जो लद्दाख से होकर आया था।

कुछ अन्य वन्य पशु भी सहारा में पाए जाते हैं। हिरन, गीदड़, रेत-मूस, लोमड़ी, चिंकारा उनमें से कुछ हैं। कीटों में विभिन्न प्रकार की मकड़ियाँ व बिच्छू इस मरुस्थल में पाए जाते हैं।

लद्दाख - शीत मरुस्थल

लद्दाख संसार के सबसे ठंडे क्षेत्रों में से एक है। यह जम्मू तथा कश्मीर राज्य का एक भाग है। भारी हिमपात के कारण लद्दाख शेष भारत से लगभग छह मास तक कटा रहता है।

लद्दाख को चंद्रभूमि, चंद्र खंड या अंतिम संगरिला कहते थे। ये नाम इस स्थान के एकांत तथा सुदूरता के द्योतक हैं। लद्दाख को स्थानीय **खा-पा-चान** कहते हैं जिसका अर्थ होता है **हिमभूमि।**

लद्दाख एक बहुत विस्तृत बालू का मरुस्थल है जहाँ कठोर शैलों वाले पर्वत तथा कंकड़ों वाले ढाल पाए जाते हैं। कठोर ठंड के कारण, वनस्पति जीवित नहीं रह सकती। कठोर जलवायु ने लोगों को यहाँ बसने से रोका है।

सिंधु नदी लद्दाख के बीच से बहती है। बस्तियाँ केवल नदी की घाटी के सहारे मिलती हैं। लेह लद्दाख का मुख्यालय है जो सिंधु घाटी के हृदयस्थल पर स्थित है। नूब्रा, श्योक, सुरू, जाँस्कर अन्य नदियाँ हैं जो लद्दाख में बहती हैं और घाटियाँ बनाती हैं।

अब तक आप गरम मरुस्थल तथा शीत मरुस्थल के बीच आधारभूत अंतर समझ गए होंगे। गरम मरुस्थल में जल बहुत कम होता है परंतु शीत मरुस्थल में बहुत कम तापमान के

कारण धरातल का जल जम जाता है। दोनों स्थितियों में ये बहुत अधिक शुष्कता का अनुभव करते हैं जिसकी वजह से वनस्पति नहीं पनप सकती। दोनों क्षेत्रों में पवन-अपरदन तथा अपक्षय बहुत क्रियाशील रहता है।

लद्दाख अनेक दर्रों द्वारा पहुँचा जा सकता है। इनमें कराकोरम तथा ज़ोजीला दर्रा महत्त्वपूर्ण है। भारत का एक भौतिक मानचित्र देखकर आप कुछ अन्य दर्रों के नामों की सूची बना सकते हैं।

गरमी के महीनों में, जब बर्फ पिघलती है, कुछ फल जैसे सेब, खूबानी, अखरोट, शहतूत आदि पैदा होते हैं। पर्वतों के निचले भागों में पेंसिल देवदार, एल्म, यू, साइप्रेस और विलो के वृक्ष पाए जाते हैं।

पशुओं में याक, गाय, बकरी, भेड़, कुत्ते पाले जाते हैं। इस क्षेत्र में जंगली याक, जंगली भेड़, खरगोश, कियांग (जो खच्चर जैसा दिखता है), बारहसिंघा आदि जंगली पशु पाए जाते हैं। यहाँ रेंगने वाले जीवों में केवल गिरगिट पाया जाता है। कबूतर, भूरा बगुला, पिनटेल, चिकार, केरियन कौवा लद्दाख में दिखने वाले पक्षी हैं। खनिजों में बोरेक्स तथा गंधक लद्दाख में प्रचुरता से पाए जाते हैं।

1970 के दशक से लद्दाख में बहुत परिवर्तन हुआ है। अपने एकांत के बावजूद लेह विदेशों से भी पर्यटक आकर्षित करता है। पर्यटन सबसे महत्त्वपूर्ण उद्योग है। अकेले लेह में लगभग 400 होटल हैं। श्रीनगर-लेह मार्ग का प्रारंभ होना इस क्षेत्र को सारे विश्व के लिए खोलने में एक बड़ा कदम रहा है। लेह में नियमित वायुयान-सेवा भी है। इस प्रकार के विकास ने लद्दाख के लोगों की जीवन शैली में परिवर्तन किया है।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) प्रेयरी घास के मैदान का क्या विस्तार है?

   (ख) प्रेयरी की जलवायु दशाएँ संक्षेप में बताइए।

   (ग) प्रेयरी की मुख्य खाद्यान्न फसलें क्या हैं?

   (घ) वेल्ड के तीन प्रमुख विभाग क्या हैं?

   (ङ) वेल्ड के प्रमुख खनिज संसाधनों के नाम बताइए।

   (च) अमेज़न घाटी पारिस्थितिक दृष्टि से इतनी महत्त्वपूर्ण क्यों हैं?

   (छ) गंगा-ब्रह्मपुत्र के मैदानों का विस्तार बताइए।

   (ज) सहारा की मरुभूमि के मरुद्यानों में उत्पन्न की जा सकने वाली फसलों के नाम बताइए।

   (झ) लद्दाख से होकर बहने वाली मुख्य नदियों के नाम बताइए।

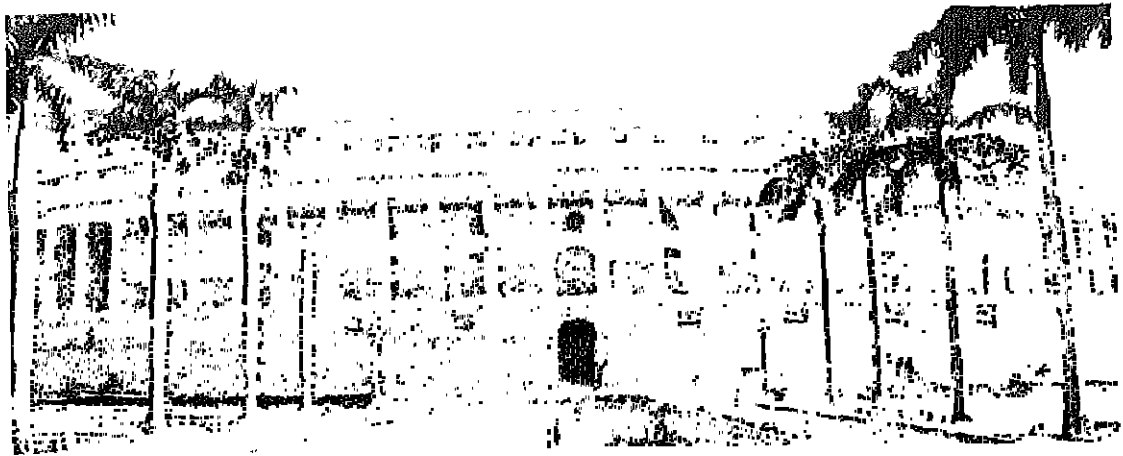
2. **रिक्त स्थानों की पूर्ति कीजिए**
   - (क) प्रेयरी भू-दृश्य में ऊँची घास महत्त्वपूर्ण हैं, जो _____ मीटर तक ऊँची होती हैं।
   - (ख) वेल्ड की मुख्य खाद्यान्न फसल ____________ है।
   - (ग) अमेज़न घाटी में ____________ सबसे महत्त्वपूर्ण खाद्य फसल है।
   - (घ) ____________ गंगा के किनारे स्थित एक प्राचीन नगर है।
   - (ङ) लद्दाख का मुख्यालय ____________ है।

3. **परियोजना कार्य**
   - संसार के मानचित्र में निम्नलिखित प्रदर्शित कीजिए -
     - (क) संसार के सभी गरम मरुस्थल।
     - (ख) दो उपोष्ण कटिबंधीय घास के मैदान।
     - (ग) चीन, भारत तथा ब्राज़ील में नदी निर्मित प्रमुख तीन मैदान।

इकाई तीन

लोग और सरकार

समाज के बिना हम खुशहाल और शांतिमय जीवन नहीं जी सकते। हमारी आवश्यकताएँ केवल समाज में ही पूरी होती हैं। आवश्यकताओं की पूर्ति के लिए हम अनेक संस्थाएँ निर्मित करते हैं। इन संस्थाओं के अंतर-संबंधों से ही हमारा सामाजिक जीवन विभिन्न सामाजिक नियमों, रीति-रिवाजों और परंपराओं द्वारा व्यवस्थित होता है। लेकिन साथ ही हमें स्वतंत्रता पसंद है — अपने विचार प्रकट करने की स्वतंत्रता, अपनी रुचि एवं आदर्शों के अनुरूप जीवन जीने की स्वतंत्रता तथा अपने प्रकार की निजी पूजा-पद्धति चुनने की स्वतंत्रता हमें प्रिय है। इसके परिणामस्वरूप व्यक्तिगत स्वतंत्रता और सामाजिक प्रतिबंधों के बीच संघर्ष उत्पन्न होता है। संघर्ष का समाधान निकालने, कानून बनाने और समाज में व्यवस्था लागू करने में अपनी भूमिका के कारण सरकार एक विशेष और सर्वोच्च संगठन बन जाती है।

इस अध्याय में हम नागरिकों और सरकार के बीच के संबंधों पर विशेष ध्यान देंगे जिनसे हमारे समाज को एक व्यवस्थित रूप मिला है। सामूहिक

निर्णय कैसे किए जाते हैं? इन्हें कैसे लागू किया जाता है? कानून कौन बनाता है? उन्हें कौन लागू करता है? इन सब के बारे में तथा नागरिकों के मौलिक अधिकारों एवं कर्तव्यों के बारे में जानेंगे। हमारे लिए अपने देश की सरकार के संगठन एवं कार्यों को जानना आवश्यक है क्योंकि केवल तभी हम सरकार के विभिन्न स्तरों पर सक्रिय होकर समुचित भागीदारी करके अपने देश की सच्ची सेवा कर सकते हैं।

अध्याय 9

बीसवीं सदी में भारत और विश्व

भारत के इतिहास में हम बीसवीं सदी को महत्त्वपूर्ण काल के रूप में लेते हैं। इस काल में भारत ब्रिटिश शासन की लंबी अवधि के बाद स्वतंत्र हुआ। 1947 तक भारत पर अंग्रेज़ों का शासन था। उन्होंने हमारे देश पर गहरा प्रभाव छोड़ा और इसके इतिहास की दिशा को अनेक प्रकार से परिवर्तित किया। इस समय के दौरान अनेक परिवर्तन हुए। इन परिवर्तनों में से कुछ का निकट संबंध विश्व भर में घट रही घटनाओं से था। आइए, हम पिछली सदी की घटनाओं का संक्षेप में अध्ययन करें।

1914 का विश्व युद्ध एक ऐसी ऐतिहासिक घटना है जिसने लगभग सभी देशों को प्रभावित किया। यह युद्ध लगभग 4 वर्ष तक चला और इससे व्यापक विनाश हुआ। शांति-संधि पर हस्ताक्षर करने के बाद संयुक्त राज्य अमेरिका और यूरोप की शक्तियाँ विश्व में शांति स्थापित करने को उत्सुक थीं। इसलिए उन्होंने 'राष्ट्र संघ' नामक एक अंतर्राष्ट्रीय संस्था का गठन किया।

भारतीयों ने ब्रिटिश सरकार की ओर से युद्ध प्रयासों में अपना भरपूर सहयोग दिया। भारत के लोगों की आशाएँ काफ़ी बढ़ी हुई थीं क्योंकि अंग्रेज़ों ने कुछ स्वतंत्रता देने का वायदा किया था। लेकिन युद्ध के बाद ऐसा कुछ नहीं किया गया जो भारतीयों को संतुष्ट कर सकता था। उन्होंने स्वतंत्रता के लिए अपना संघर्ष जारी रखा। स्वतंत्रता संघर्ष में भारत के राजनीतिक दृश्य-पटल पर महात्मा गांधी का उभरना एक अत्यंत महत्त्वपूर्ण घटना थी। 1929 में भारतीय राष्ट्रीय कांग्रेस ने पूर्ण स्वतंत्रता प्राप्त करने की शपथ ली।

1939 में प्रारंभ हुए द्वितीय विश्व युद्ध ने विश्व इतिहास की दिशा बदल दी और भारत को भी प्रभावित किया। भारतीय राष्ट्रवादियों ने ब्रिटिश सरकार को उसके युद्ध प्रयासों में सहयोग देने से पहले पूर्ण स्वतंत्रता के वायदे की माँग की। द्वितीय विश्व-युद्ध के समाप्त होने तक भारत का स्वतंत्रता संघर्ष निर्णायक स्थिति में पहुँच चुका था और काफ़ी तीव्र हो चुका था। महात्मा गांधी द्वारा प्रारंभ किए 'भारत छोड़ो आंदोलन' ने भारत में ब्रिटिश साम्राज्य की जड़ें हिला दी थीं। ब्रिटेन अपनी आंतरिक कमज़ोरियों

और भारत में जन जागरण तथा मज़बूत आंदोलन के कारण भारत पर अपनी पकड़ बनाए रखने की स्थिति में नहीं था। इसलिए अंग्रेज़ भारत से चले गए और भारत को स्वतंत्रता प्राप्त हुई। लेकिन जाने से पहले उन्होंने हमारे देश का विभाजन कर दिया और भारत तथा पाकिस्तान, दो स्वतंत्र देश बना दिए।

24 अक्टूबर, 1945 को युद्ध रोकने तथा शांति बनाए रखने में असफल रहे 'राष्ट्र संघ' के स्थान पर 'संयुक्त राष्ट्र संघ' अस्तित्व में आया। 'संयुक्त राष्ट्र संघ' के उद्देश्य हैं – युद्ध रोकना तथा अंतर्राष्ट्रीय सुरक्षा और शांति बनाए रखना। यह सामाजिक उन्नति, मानव प्रगति और मानव अधिकारों के प्रति सम्मान का भी ध्यान रखता है।

भयानक और घमासान लड़ाई के बाद 1945 में युद्ध समाप्त हुआ। जर्मनी, जापान और इटली हार गए थे, लेकिन जीतने वाले देश अपने वैचारिक मतभेदों को स्थाई रूप से नहीं भुला सके। साम्यवादी और लोकतांत्रिक देशों के बीच प्रतिद्वंद्विता उभर कर सामने आई और युद्ध के बाद विश्व दो गुटों में बँट गया। एक का नेतृत्व सोवियत समाजवादी गणराज्य संघ कर रहा था और दूसरे का संयुक्त राज्य अमेरिका। दोनों गुटों के बीच प्रतिद्वंद्विता ने विश्व में तनाव पैदा किया, लेकिन फिर भी इन गुटों के नेता लड़ाई के लिए खुलकर सामने नहीं आए। तनाव की इस स्थिति को शीत-युद्ध कहा गया।

इस पृष्ठभूमि में भारत ने गुट निरपेक्षता का रास्ता चुना, जिसका अर्थ है- किसी भी गुट में शामिल न होना। साथ ही भारत ने दोनों गुटों से मैत्रीपूर्ण संबंध बनाए रखे। यह किसी गुट में शामिल हुए बिना, अपने राष्ट्रीय हितों की रक्षा करने एवं अंतर्राष्ट्रीय मामलों पर गुण-अवगुण के आधार पर स्वतंत्र निर्णय लेने की एक अद्वितीय नीति है।

बीसवीं सदी के अंतिम दशक में अन्य कई महत्त्वपूर्ण घटनाएँ घटीं। 1990 में जर्मनी का एकीकरण, 1991 में सोवियत संघ का विघटन और यूरोपीय संघ का उदय इसके कुछ उदाहरण हैं। सोवियत संघ के विघटन का तात्कालिक प्रभाव शीत युद्ध की समाप्ति था। द्विध्रुवीय विश्व अब एक-ध्रुवीय विश्व में परिवर्तित हो गया जिसमें मात्र संयुक्त राज्य अमेरिका ही एक महाशक्ति के रूप में बचा रहा। यूरोप में राजनीतिक और आर्थिक संबंधों में निकटता लाने का प्रयास चल रहा था। यूरोप के देशों ने आर्थिक क्षेत्र में अपने आप को एक इकाई के रूप में संगठित करके एक संयुक्त मुद्रा प्रचलित करने के लिए 'यूरोपीय संघ' बनाया। आज के विश्व में देशों के बीच परस्पर निर्भरता तथा आपसी सहयोग की बढ़ती भावना देखने को मिलती है। अब भूमंडलीकरण का युग प्रारंभ हुआ है जिसमें भारत एक विकसित देश के रूप में उभर रहा है।

यूरोपीय संघ की मुद्रा बताइए।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

(क) भारतीय राष्ट्रीय कांग्रेस ने किस वर्ष में पूर्ण स्वतंत्रता प्राप्त करने की शपथ ग्रहण की थी?

(ख) संयुक्त राष्ट्र संघ के उद्देश्य क्या हैं?

(ग) ब्रिटेन ने भारत से वापस जाने का निर्णय क्यों लिया?

(घ) भारत ने गुट निरपेक्षता की नीति को क्यों चुना?

(ङ) बीसवीं सदी के अंतिम दशक में घटीं दो महत्त्वपूर्ण घटनाओं के विषय में लिखिए।

2. **निम्नलिखित स्तंभों को मिलाकर सही जोड़े बनाइए**

(क) प्रथम विश्व युद्ध	(अ) 1945
(ख) द्वितीय विश्व युद्ध	(ब) 1939-45
(ग) संयुक्त राष्ट्र संघ	(स) 1991
(घ) जर्मनी का एकीकरण	(द) 1990
(ङ) सोवियत संघ का विघटन	(य) 1914-18

3. **परियोजना कार्य**

- भारत के राष्ट्रीय आंदोलन के कुछ महत्त्वपूर्ण नेताओं के चित्र एकत्र कर उन्हें अपनी स्क्रैप बुक में चिपकाइए।

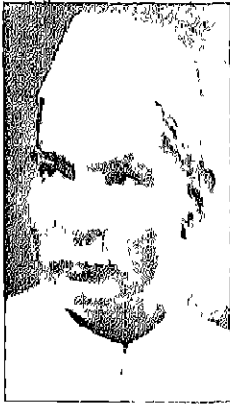
अध्याय 10

हमारे संविधान का निर्माण

इससे पहले, हम पढ़ें कि भारत का संविधान कैसे बना और इसकी मुख्य विशेषताएँ क्या हैं, हमें जानना चाहिए कि 'संविधान' क्या होता है।

संविधान, कानूनों का एक महत्त्वपूर्ण दस्तावेज़ है जो सरकार की मूल संरचना और इसके कार्यों को निर्धारित करता है, जिनके अनुसार देश पर शासन चलता है। प्रत्येक सरकार को संविधान में लिखे कानूनों के अनुसार कार्य करने होते हैं। संविधान देश के अन्य सभी कानूनों से श्रेष्ठ है। यह सर्वोच्च कानून है जो सरकार के अंगों तथा नागरिकों के आधारभूत अधिकारों को परिभाषित एवं सीमांकित करता है।

हमारे संविधान की रचना

भारत का संविधान भारतीय लोगों के प्रतिनिधियों द्वारा लंबी बहस और विचार-विमर्श के उपरांत बनाया गया। संविधान बनाने वाली सभा, जिसे 'संविधान सभा' कहते हैं, की पहली बैठक 9 दिसंबर, 1946 को हुई थी। इसके सदस्यों में विभिन्न राजनीतिक दलों के प्रतिनिधि, जनमत के विभिन्न विचारों और समाज के सभी वर्गों के प्रतिनिधियों के अतिरिक्त महान स्वतंत्रता

राजेंद्र प्रसाद

बी.आर.अंबेडकर

सरोजिनी नायडू

मौलाना अबुल कलाम आज़ाद

विजयलक्ष्मी पंडित

सेनानी, न्यायविद् और विद्वान सम्मिलित थे। संविधान सभा में पंडित जवाहरलाल नेहरू, डॉ. राजेंद्र प्रसाद, सरदार वल्लभभाई पटेल, मौलाना अबुल कलाम आज़ाद, डॉ. श्यामा प्रसाद मुखर्जी और सरदार बलदेव सिंह जैसे कई महान राजनीतिक नेता थे। कुछ संविधान विशेषज्ञ जैसे श्री अलादी कृष्णास्वामी अय्यर, डॉ. बी. आर. अंबेडकर और श्री के.एम. मुंशी भी संविधान सभा के सदस्य थे। श्रीमती सरोजिनी नायडू और श्रीमती विजयलक्ष्मी पंडित इसकी महत्त्वपूर्ण महिला सदस्य थीं। डॉ. राजेंद्र प्रसाद संविधान सभा के अध्यक्ष थे।

संविधान सभा ने डॉ. बी.आर. अंबेडकर की अध्यक्षता में एक प्रारूप समिति का गठन किया। इसने संविधान का प्रारूप तैयार करने में लगभग 3 वर्ष का समय लिया। नया संविधान, संविधान सभा द्वारा 26 नवंबर, 1949 को अपनाया गया और यह 26 जनवरी, 1950 को पूर्ण रूप से लागू हुआ, जिस दिन को हम प्रति वर्ष गणतंत्र दिवस के रूप में मनाते हैं।

जवाहरलाल नेहरू संविधान पर हस्ताक्षर करते हुए

भारतीय संविधान का प्रारंभ निम्नलिखित शब्दों के साथ होता है —

उद्देशिका

हम, भारत के लोग, भारत को एक **संपूर्ण प्रभुत्व-संपन्न, समाजवादी, पंथ-निरपेक्ष, लोकतंत्रात्मक गणराज्य** बनाने के लिए तथा उसके समस्त नागरिकों को सामाजिक, आर्थिक और राजनैतिक **न्याय;** विचार, अभिव्यक्ति, विश्वास, धर्म और उपासना की **स्वतंत्रता;** प्रतिष्ठा और अवसर की **समता** प्राप्त कराने के लिए तथा उन सब में व्यक्ति की गरिमा और राष्ट्र की एकता और अखंडता सुनिश्चित करने वाली **बंधुता** बढ़ाने के लिए दृढ़ संकल्प होकर **अपनी इस संविधान सभा में** आज तारीख 26 नवंबर, 1949 ई. **को एतद् द्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।**

इस उद्देशिका को याद करके अपनी कक्षा में सुनाएँ।

इसे हमारे संविधान की उद्देशिका कहा जाता है। उद्देशिका का अर्थ है परिचय, जिसमें संविधान के लक्ष्य और उद्देश्य उल्लिखित हैं। ये लक्ष्य और उद्देश्य हमारे राष्ट्रीय लक्ष्य बन गए हैं, जिनकी ओर हम अपने समाज को ले जाना चाहते हैं।

आइए हम **अपने राज्य की प्रकृति और प्रकार** के विषय में समझने का प्रयास करें, जिसका संविधान की उद्देशिका में उल्लेख है।

संपूर्ण प्रभुत्व संपन्न राज्य

स्वाधीनता के बाद हम एक स्वतंत्र देश बने। हम अपनी सरकार चलाने तथा अपनी विदेश

नीति बनाने को स्वतंत्र हैं। हमारा देश संपूर्ण प्रभुत्व संपन्न है अर्थात हम अपने से संबंधित सभी मामलों में सर्वोच्च हैं। इसीलिए उद्देशिका में हमारे देश का एक संपूर्ण प्रभुत्व संपन्न राष्ट्र के रूप में उल्लेख किया गया है।

समाजवादी राज्य

हम जानते हैं कि हमारे देश में अधिकांश लोग गरीब हैं, जबकि अन्य कुछ बहुत अमीर हैं। ऐसी आर्थिक असमानता हमारी प्रगति को धीमा करती है। इसी प्रकार हमारे बीच सामाजिक असमानता है। इसलिए हमारे देश में आर्थिक और सामाजिक समानता लाने की आवश्यकता है। आर्थिक और सामाजिक समानता पर आधारित समाज का विचार, समाजवाद कहलाता है।

पंथ-निरपेक्ष राज्य

एक पंथ-निरपेक्ष राज्य व्यक्ति को धर्म की स्वतंत्रता प्रदान करता है। इसका यह भी अर्थ है कि सभी धर्मों को एक समान आदर दिया जाता है। भारत भी एक पंथ-निरपेक्ष राज्य है। हमारे देश में सभी नागरिकों को, भले ही वे हिंदू, मुसलमान, सिक्ख, ईसाई अथवा पारसी हों, अपने धर्म का प्रचार और पालन करने का अधिकार है। सभी नागरिक अपने भिन्न-भिन्न धार्मिक विश्वासों के बावजूद कानून की दृष्टि में एक समान हैं।

लोकतांत्रिक राज्य

लोकतंत्र में प्रत्येक नागरिक को समान राजनीतिक अधिकार प्राप्त होते हैं। एक लोकतांत्रिक सरकार लोगों के प्रतिनिधियों द्वारा चलाई जाती है। भारत में उन नागरिकों को, जो 18 वर्ष की आयु पूरी कर चुके हैं, मत देने तथा अपने प्रतिनिधि चुनने में भाग लेने का अधिकार है। मत देने के अधिकार को मताधिकार कहते हैं। हमारे देश में सार्वभौमिक वयस्क मताधिकार है जो 'एक व्यक्ति, एक मत, एक मूल्य' के सिद्धांत पर आधारित है। जाति, प्रजाति, लिंग और धर्म के भेदभाव के बिना प्रत्येक नागरिक को मत देने तथा चुनाव लड़ने का अधिकार है। हम अपनी सरकार चुनने को स्वतंत्र हैं।

गणराज्य

भारत एक गणतंत्र है। प्रत्येक पाँच वर्ष बाद आम चुनाव होते हैं और हम अपनी सरकार चुनते हैं। भारतीय राष्ट्रपति का चुनाव 5 वर्षों के लिए होता है और वह राज्य का प्रधान है। जिस राज्य में, राज्य का प्रधान, लोगों द्वारा एक निश्चित समय के लिए चुना जाता है, वह राज्य गणतंत्र या गणराज्य कहलाता है।

> ऐसे दो देशों के नाम खोजिए, जहाँ राज्य का प्रधान 'राजा' है।

संविधान की उद्देशिका में **राज्य के समक्ष** रेखांकित किए गए **उद्देश्य** निम्नलिखित हैं —

न्याय

पूरे समाज की भलाई ही न्याय का लक्ष्य है। हमारा संविधान अपने सभी नागरिकों को सामाजिक, आर्थिक और राजनीतिक न्याय दिलाने का दावा करता है। सामाजिक न्याय का अर्थ है — धर्म, जाति, प्रजाति, लिंग के आधार पर भेद-भाव को दूर करना। आर्थिक न्याय, संपत्ति के समान वितरण को सुनिश्चित करता है।

राजनीतिक न्याय का अर्थ है – सरकार में भाग लेने के समान अवसर।

स्वतंत्रता

किसी भी नागरिक को अपने पूर्ण विकास के लिए अनेक प्रकार की स्वतंत्रताओं की आवश्यकता होती है। भारतीय नागरिकों को विचार, अभिव्यक्ति, विश्वास, धर्म और उपासना की स्वतंत्रता दी गई है।

समता

समता के बिना स्वतंत्रता निरर्थक है। समता का अर्थ है — नागरिकों के संपूर्ण विकास के लिए समान अवसर उपलब्ध करवाना। समता का विचार जाति, प्रजाति, लिंग और धर्म के आधार पर भेद-भाव पर प्रतिबंध लगाता है। भारत का प्रत्येक नागरिक कानून के समक्ष समान है और उसे समान सुरक्षा देना सुनिश्चित किया गया है।

बंधुता

उद्देशिका में हम में से प्रत्येक को अपने साथियों के साथ भाई-चारे की भावना से व्यवहार करने का संकल्प है। यह व्यक्ति की गरिमा भी सुनिश्चित करती है जो हमारी राष्ट्रीय एकता को समृद्ध और सुदृढ़ करती है।

एकता और अखंडता

भिन्न-भिन्न क्षेत्रों के लोगों को एक साथ लाना और उनमें एकता को सुदृढ़ करना हमारा राष्ट्रीय उद्देश्य है, ताकि वे अपने देश की उन्नति के लिए साथ मिल कर काम कर सकें। इसलिए उद्देशिका भारत को सुदृढ़ और संगठित बनाने के लिए भाई-चारे की भावना स्थापित करने पर बल देती है।

लोकतांत्रिक मूल्यों पर आधारित न्यायपूर्ण समाज की स्थापना के लिए इन विभिन्न आदर्शों का उल्लेख हुआ है।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) संविधान का क्या अर्थ है?
   (ख) संविधान सभा का अध्यक्ष कौन था?
   (ग) 'उद्देशिका' का क्या अभिप्राय है?
   (घ) भारत किस दृष्टि से लोकतांत्रिक देश है?
   (ङ) क्या भारत पंथ-निरपेक्ष देश है? यदि हाँ तो क्यों?
   (च) हमारे राज्य की प्रकृति का वर्णन करें।
   (छ) 'भारत एक गणतंत्र है'- किस प्रकार?
   (ज) उद्देशिका में उल्लिखित पाँच उद्देश्य कौन से हैं? वर्णन कीजिए।
   (झ) उद्देशिका में समानता को किस प्रकार समझाया गया है?
   (ञ) हम भारत को सुदृढ़ एवं संगठित बनाने में किस प्रकार सहायता कर सकते हैं?

(ट) निम्नलिखित को संक्षेप में समझाइए —

(अ) संप्रभुता (ब) न्याय (स) स्वतंत्रता (द) बंधुता

2. **निम्नलिखित स्तंभों को मिलाकर सही जोड़े बनाइए**

(क) हमारा संविधान अपनाया गया था	(अ) 9 दिसंबर, 1946
(ख) हमारा संविधान लागू हुआ था	(ब) 26 नवंबर, 1949
(ग) संविधान की प्रारूप समिति के अध्यक्ष	(स) 26 जनवरी, 1950
(घ) संविधान निर्माण में लगाया गया समय	(द) अलादी कृष्णास्वामी, बी. आर. अंबेडकर, के. एम. मुंशी
(ङ) संविधान सभा की पहली बैठक हुई थी	(य) बी. आर. अंबेडकर
(च) संविधान सभा में सम्मिलित कुछ संविधान विशेषज्ञ थे	(र) लगभग 3 वर्ष

3. **परियोजना कार्य**

- पूरी उद्देशिका को एक सुंदर चार्ट पर लिख कर अपनी कक्षा में लगाएँ।

अध्याय 11

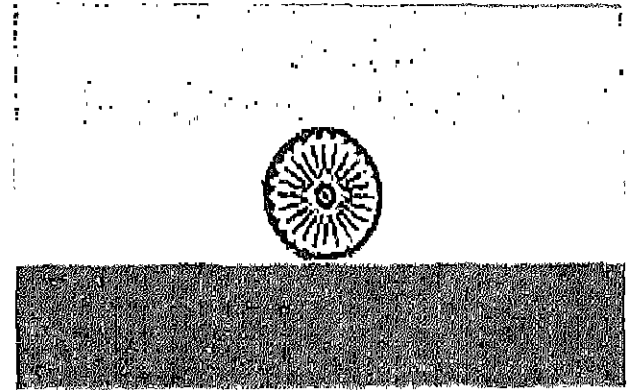
हमारे राष्ट्रीय प्रतीक और पहचान

सभी सभ्य मानवों में अपने देश के प्रति जन्म से ही प्यार होता है। राष्ट्रीय प्रतीकों के प्रति सम्मान दर्शा कर तथा राष्ट्रीय गौरव और गरिमा को अपनी पहचान बना कर इसे व्यक्त किया जाता है। हमारा राष्ट्र-ध्वज, राष्ट्रीय चिह्न, राष्ट्र-गान, राष्ट्रीय गीत, राष्ट्रीय पशु, राष्ट्रीय पक्षी और राष्ट्रीय पुष्प, न केवल राष्ट्रीय एकता अपितु हमारी स्वतंत्रता के भी प्रतीक हैं। इन राष्ट्रीय प्रतीकों का सम्मान करना हमारा कर्तव्य है।

राष्ट्र-ध्वज

संविधान सभा ने भारत की स्वतंत्रता प्राप्ति से केवल तीन सप्ताह पूर्व 22 जुलाई, 1947 को राष्ट्र-ध्वज को अपनाया। यह आयताकार है और इसकी लंबाई और चौड़ाई में 3:2 का अनुपात है। यह ध्वज तीन समान क्षैतिज भागों में बँटा हुआ है और तीनों भागों के रंग भिन्न हैं। ऊपर की पट्टी गहरे केसरी रंग की है। इस रंग का अपना इतिहास और परंपरा है। केसरिया रंग त्याग, शौर्य और बलिदान का प्रतीक है। यह रंग स्वतंत्रता संघर्ष में अपना जीवन न्यौछावर करने वालों के बलिदान और देश-भक्ति की निरंतर याद दिलाता है। यह हमें इन उच्च गुणों को अपने चरित्र में बसा लेने की प्रेरणा देता है।

बीच की पट्टी शुद्ध श्वेत है। यह सत्य और शांति का प्रतीक है। इन दोनों गुणों पर सभी धर्मों में बल दिया गया है। श्वेत रंग हमें सच्चा, शुद्ध और सरल बनने के लिए प्रेरित करता है।

सबसे नीचे की पट्टी गहरे हरे रंग की है। हरा रंग जीवन, उत्पादकता और खुशहाली को दर्शाता है। दूसरे शब्दों में यह विश्वास और दृढ़ता का प्रतीक है।

राष्ट्र-ध्वज

श्वेत पट्टी के मध्य में 24 तीलियों वाला गहरे नीले रंग का **चक्र** है। चक्र का ऐतिहासिक महत्त्व है। सारनाथ में सम्राट अशोक द्वारा बनवाया गया एक स्तंभ है, जिसे इस स्थान पर भगवान बुद्ध द्वारा दिए गए प्रथम उपदेश की स्मृति में बनवाया गया था। हमारे राष्ट्र-ध्वज

का चक्र यहीं से लिया गया है। अशोक के स्तंभ में यह **धर्म** का प्रतीक है। चक्र गति, प्रगति और उत्साह को इंगित करता है। यह हमें धर्म एवं सच्चाई के रास्ते पर चलने और देश को उन्नति और समृद्धि की ओर ले जाने के लिए भी प्रेरित करता है।

राष्ट्र-ध्वज का सम्मान करना प्रत्येक नागरिक के मूल कर्तव्यों में से एक है। हमारा ध्वज राष्ट्रीय भावना और सामंजस्य की परंपरा का प्रतिनिधित्व करता है। जब भी राष्ट्र-ध्वज फहराया जाए इसे आदर का स्थान मिलना चाहिए। इसका किसी भी प्रकार से दुरुपयोग नहीं करना चाहिए। राष्ट्र-ध्वज का दुरुपयोग अथवा गलत प्रयोग लोगों की भावनाओं को आहत कर सकता है। भारतीय लोगों द्वारा राष्ट्रीय और अंतर्राष्ट्रीय खेलों में राष्ट्र-ध्वज को प्रदर्शित करना, उनकी देश-भक्ति और देश-प्रेम की भावना को दर्शाता है।

क्या आप जानते हैं कि हमें अपने राष्ट्र-ध्वज का सम्मान किस प्रकार करना चाहिए? आइए। इसका सही ढंग सीखें –

- जब राष्ट्र-ध्वज फहराया जाए तो केसरिया पट्टी को सबसे ऊपर होना चाहिए।
- राष्ट्र-ध्वज से ऊँचा अथवा इसके दाईं ओर कोई झंडा अथवा प्रतीक नहीं रखना चाहिए।
- यदि बहुत से झंडे एक पंक्ति में हों तो अन्य सभी झंडे राष्ट्र-ध्वज के बाईं ओर होने चाहिए।
- जब इन झंडों को फहराया जाए तो राष्ट्र-ध्वज सबसे ऊँचा होना चाहिए।
- जब राष्ट्र-ध्वज को किसी (जहाँ अन्य झंडों की पंक्ति हो) परेड अथवा जुलूस में ले जाया जा रहा हो तो इसे मार्च करने वालों के दाईं ओर अथवा सबसे आगे बीच में होना चाहिए।
- साधारणतया राष्ट्र-ध्वज को राष्ट्रपति भवन, संसद, सर्वोच्च न्यायालय, उच्च न्यायालयों, सचिवालय, आयुक्त के कार्यालय इत्यादि जैसे महत्त्वपूर्ण सरकारी भवनों पर लहराया जाना चाहिए।
- राष्ट्र-ध्वज या इसकी नकल को व्यापार अथवा व्यवसाय के लिए प्रयोग नहीं किया जाना चाहिए।
- राष्ट्र-ध्वज को सायं सूर्यास्त के साथ उतार लेना चाहिए।

राष्ट्रीय चिह्न

राष्ट्रीय चिह्न भारत सरकार की मोहर है। हम इस चिह्न को सभी मुद्राओं और सिक्कों तथा सरकारी पत्रों और पुस्तकों पर देख सकते हैं।

राष्ट्रीय चिह्न दो भागों में है – ऊपरी भाग और आधार। ऊपरी भाग में सपाट आधार पर तीन शेर पीठ से पीठ लगा कर खड़े दिखाई देते हैं। वास्तव में ये चार शेर हैं परंतु चित्र में चौथा **शेर देखाई नहीं देता**। आधार में बाईं ओर एक घोड़ा, दाईं ओर एक बैल और बीच में एक चक्र दिखाई देता है। ऊपरी भाग के नीचे देवनागरी लिपि में 'सत्यमेव जयते' लिखा हुआ है जिसका अर्थ है– ''केवल सत्य की ही विजय होती है।''

राष्ट्रीय चिह्न

चक्र धर्म का प्रतीक है। शेर साहस, ऐश्वर्य और शक्ति दर्शाते हैं। घोड़ा ऊर्जा और वेग तथा बैल मेहनत

और दृढ़ता का प्रतीक है। ये वे गुण हैं जिन्हें इस देश के प्रत्येक नागरिक को अपने व्यवहार और चरित्र में दर्शाने का संकल्प करना चाहिए।

प्रत्येक नागरिक का यह मौलिक कर्तव्य है कि वह संविधान का पालन करे और इसके आदर्शों तथा हमारी विरासत, संप्रभुता, एकता और अखंडता के प्रतीकों का आदर करे।

राष्ट्र-गान

राष्ट्र-गान को भी देश की संप्रभुता और अखंडता का प्रतीक माना जाता है। यह रवींद्रनाथ टैगोर द्वारा लिखा गया था। पूरी कविता में पाँच पद हैं, लेकिन केवल पहले पद को ही राष्ट्र-गान में लिया गया है। राष्ट्र-गान इस प्रकार है —

> जन-गण-मन-अधिनायक, जय हे
> भारत-भाग्य-विधाता।
> पंजाब-सिंधु-गुजरात-मराठा-
> द्राविड़-उत्कल-बंग
> विंध्य-हिमाचल-यमुना-गंगा
> उच्छल-जलधि-तरंग।
> तव शुभ नामे जागे,
> तव शुभ आशिष मागे,
> गाहे तव जय-गाथा,
> जन-गण-मंगल-दायक, जय हे,
> भारत-भाग्य-विधाता।
> जय हे, जय हे, जय हे,
> जय जय जय, जय हे!

राष्ट्र-गान हमारी मातृभूमि की प्रशंसा में एक गीत है। यह हमें सहनशीलता और राष्ट्रीय एकता का संदेश देता है। जब इसे गाया जा रहा हो अथवा इसकी धुन बज रही हो तो हमें कुछ नियमों का पालन करना चाहिए —

- जब राष्ट्र-गान गाया अथवा बजाया जाता है तो प्रत्येक को सावधान की मुद्रा में खड़े होना चाहिए। गाते समय चलना अथवा बातें करना अत्यंत अपमानजनक है।
- प्रत्येक को राष्ट्र-गान का अर्थ ज्ञात होना चाहिए और इसे ठीक से गाने में समर्थ होना चाहिए।
- जब समूह में गाया जाए तो इसे एकस्वर और पूरे जोश से गाना चाहिए।
- राष्ट्र-गान के प्रति सम्मान सभी जगह और सभी अवसरों पर सीधे खड़े हो कर, स्थिर रह कर तथा धुन में गा कर व्यक्त करना चाहिए।
- किसी को भी जान-बूझ कर इसके गायन को रोकना नहीं चाहिए अथवा इसके गायन में जुटी सभा में विघ्न नहीं डालना चाहिए।

राष्ट्रीय गीत

राष्ट्र-गान के अतिरिक्त **'वंदे मातरम्'** राष्ट्रीय गीत है जिसे सभी महत्त्वपूर्ण राष्ट्रीय अवसरों पर गाया जाता है। इसकी रचना बंकिम चंद्र चट्टोपाध्याय ने की थी। हमारे स्वतंत्रता संघर्ष में राष्ट्रीय गीत सभी लोगों के लिए प्रेरणा का स्रोत था। इसका महत्त्व भी राष्ट्र-गान के समान है।

> अपने राष्ट्रीय गीत को गाना सीखिए।

राष्ट्रीय पशु

शक्ति और शान का प्रतीक **बाघ** भारत का राष्ट्रीय पशु है। वास्तव में इस देश में बाघ को सदैव महत्त्वपूर्ण दृष्टि से देखा गया है। कई

राष्ट्रीय पशु — बाघ

दंत कथाओं और पौराणिक कथाओं के इस नायक के सुंदर रंग, दहाड़ती आवाज़ और शक्ति ने प्राचीन समय से भारतीयों को अभिभूत किया है। सुप्रसिद्ध 'रॉयल बंगाल टाईगर' भारत का वासी है और इसे हमारे राष्ट्रीय पशु के रूप में चुना गया है।

राष्ट्रीय पक्षी

सुंदर आकर्षक **मोर** भारत का राष्ट्रीय पक्षी है। पक्षियों में शायद सबसे सुंदर मोर की प्रशंसा उसकी लंबी चमकदार गर्दन और पंखे की शक्ल वाली कलगी के लिए की जाती है। इस पक्षी का भारतीय कथाओं, साहित्य और लोक जीवन में महत्त्वपूर्ण स्थान है। मोर का नृत्य और विशेषकर वर्षा ऋतु में इसका नृत्य वास्तव में देखने योग्य होता है।

राष्ट्रीय पुष्प

कमल भारत का राष्ट्रीय पुष्प है। यह तालों और झीलों के पानी के तल पर मिलता है जिसकी जड़ें और तना पानी के नीचे होते हैं। भारतीयों के लिए यह इस सच्चाई का प्रतीक है कि मनुष्य सांसारिक बुराइयों से ऊपर उठ सकता है और स्वयं को इनसे ऊपर रख सकता है।

हमारे राष्ट्रीय प्रतीक हमारी राष्ट्रीय पहचान के मान्य चिह्न हैं। वे हमारे आदर्शों, मूल्यों और राष्ट्रीयता की भावनाओं को दर्शाते हैं। राष्ट्रीय प्रतीकों के प्रति हमारा आदर हमारी देश-भक्ति तथा अपनी मातृभूमि के प्रति प्यार को जताता है। राष्ट्रीय प्रतीकों का प्रयोग और प्रदर्शन हमारी राष्ट्रीय भावनाओं और सभी भारतीयों में एकता की भावना को जाग्रत करता है। हम ऐसे महान देश और इसकी गौरवमयी सांस्कृतिक विरासत से संबंधित होने पर गर्व अनुभव करते हैं। अपने देश के साथ हमारा भावनात्मक संबंध, हमें अपने देश की एकता की सुरक्षा और अखंडता की रक्षा करने और इस प्रकार सुदृढ़ भारत बनाने के लिए प्रेरित करता है।

राष्ट्रीय पक्षी — मोर

राष्ट्रीय पुष्प — कमल

अभ्यास

1. निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए

(क) हमें अपने राष्ट्रीय प्रतीकों का आदर क्यों करना चाहिए? कोई दो कारण बताएँ।

(ख) राष्ट्र-ध्वज के तीन रंग कौन-कौन से हैं? वे किस बात के सूचक हैं?

(ग) हमारे राष्ट्र-ध्वज में चक्र किस बात का सूचक है?

(घ) राष्ट्र-गान कब गाया जाता है? जब इसे गाया जा रहा हो अथवा इसकी धुन बजाई जा रही हो तो हमें इसके प्रति आदर किस प्रकार दर्शाना चाहिए?

(ङ) हमारे राष्ट्रीय पशु का क्या महत्त्व है?

(च) हमारा राष्ट्रीय पक्षी और राष्ट्रीय पुष्प क्या हैं?

2. निम्नलिखित स्तंभों को मिलाकर सही जोड़े बनाइए

(क) चक्र	(अ) अशोक स्तंभ
(ख) राष्ट्रीय गीत	(ब) रवींद्रनाथ टैगोर
(ग) राष्ट्रीय चिह्न	(स) देवनागरी लिपि
(घ) सत्यमेव जयते	(द) राष्ट्र-ध्वज
(ङ) राष्ट्र-गान	(य) बंकिम चंद्र चट्टोपाध्याय

3. परियोजना कार्य

- भारत के राष्ट्रीय प्रतीकों की एक स्क्रैप बुक बनाएँ।
- किन्हीं दस देशों के राष्ट्र-ध्वजों के चित्र एकत्रित करें।

अध्याय 12

नागरिकता और नागरिक जीवन

भारत की सीमा में रहने वाले सभी लोग इसके नागरिक नहीं हैं। हमें नागरिकों और विदेशियों में अंतर अवश्य जानना चाहिए। हमारे देश का नागरिक वह है जो साधारणतया भारत में स्थाई रूप से रहता है। ऐसे व्यक्ति को भारतीय कहते हैं। लेकिन कुछ लोग नागरिकों की तरह स्थाई नहीं हैं अपितु भारत में अस्थाई रूप से रहते हैं। वे भारत में किसी व्यापार अथवा पर्यटन जैसे उद्देश्यों के लिए रहते हैं। वे अन्य देशों के नागरिक हैं। उन्हें विदेशी अथवा बाहर का व्यक्ति कहा जाता है। लोग उत्तर प्रदेश, मणिपुर, केरल अथवा भारत के किसी भी अन्य राज्य से संबंधित हो सकते हैं लेकिन वे सभी केवल भारत के ही नागरिक हैं। राष्ट्रीय प्रतीकों की भाँति इकहरी नागरिकता की भावना हमारे भीतर एकता की भावना जाग्रत करती है।

एक नागरिक अपने देश के प्रति पूर्ण वफ़ादार होता है। नागरिकता उसको कुछ अधिकार, कर्तव्य, सुविधाएँ और दायित्व प्रदान करती है जो विदेशियों के लिए नहीं होते। एक राज्य का नागरिक पूरे सामाजिक और राजनीतिक अधिकार रखता है। वह मत दे सकता है, चुने जाने का अधिकार रखता है और सरकारी पद पर रह सकता है। भारत में एक नागरिक 18 वर्ष की आयु प्राप्त कर लेने के बाद मतदान कर सकता है।

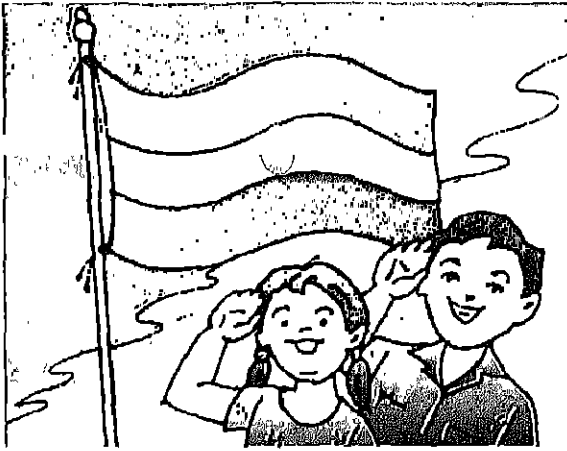
> आपकी आयु में आपको मत देने का अधिकार नहीं है। क्या आप स्वयं को भारत का नागरिक कह सकते हैं?

भारत में नागरिकता दो प्रकार की है। एक वह, जो जन्म से प्राप्त होती है और दूसरी वह, जिसे कानून द्वारा प्राप्त किया जाता है। उन बच्चों को जो भारत में पैदा हुए हैं या जिनके माता-पिता भारतीय हैं, भारतीय नागरिकता जन्म से मिल जाती है। लेकिन एक विदेशी को नागरिकता प्राप्त करनी पड़ती है। भारत की सरकार उसे ऐसी नागरिकता तब प्रदान करती है जब वह संविधान द्वारा निर्धारित कुछ निश्चित शर्तों को पूरा करता है।

एक अच्छा नागरिक कौन है

एक नागरिक होना ही पर्याप्त नहीं है। हमें एक अच्छा नागरिक भी होना चाहिए। एक अच्छा नागरिक दायित्व स्वीकार करता है और देश के कानूनों का पालन करता है। ऐसे नागरिकों को अपने अधिकारों और कर्तव्यों के प्रति सचेत रहना चाहिए। अच्छे नागरिकों को अपने

अधिकारों के प्रति जागरूक रहना चाहिए तथा दूसरों के अधिकारों का सम्मान करना चाहिए। उन्हें अपने देश की समस्याओं तथा घटनाओं से भली-भाँति अवगत रहना चाहिए। उन्हें अपने हित से अधिक देश-हित प्रिय होना चाहिए। प्रत्येक देश को अपने नागरिकों की निष्ठा, ईमानदारी और देश-भक्ति पर गर्व होता है। हम भारतीयों को भी अपने संविधान, राष्ट्र-ध्वज, राष्ट्रीय चिह्न, राष्ट्र-गान और राष्ट्रीय गीत पर गर्व है। हमें अपने देश को अपने संकीर्ण

अपने शिक्षक/शिक्षिका की सहायता से अच्छे नागरिक के दस गुणों की सूची बनाइए।

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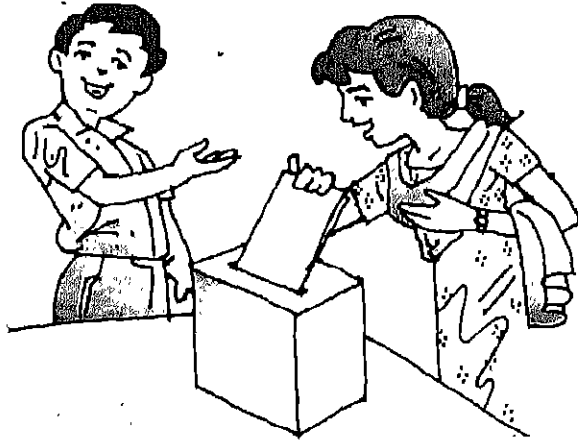
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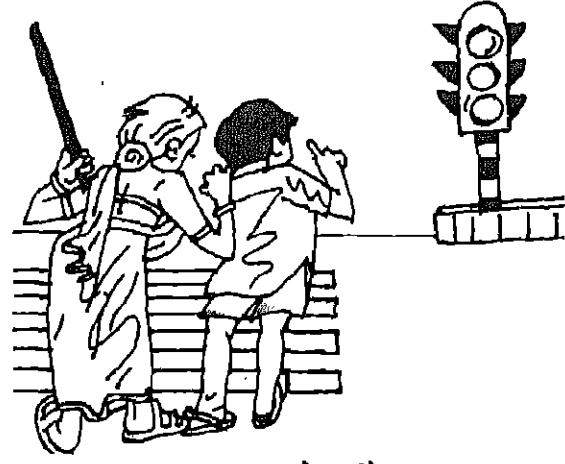

यातायात के संकेत

पढ़ते हुए बच्चे

व्यक्तिगत हितों से ऊपर रखना चाहिए, केवल तभी हम अपनी मेहनत से अर्जित की गई स्वतंत्रता और संप्रभुता की रक्षा कर पाएँगे।

नागरिक जीवन

मनुष्य के सामाजिक स्वभाव ने समाज को जन्म दिया है। अपनी आवश्यकताओं की पूर्ति के लिए उन्हें एक-दूसरे पर निर्भर रहना पड़ता है। लेन-देन के आधार ने ही कर्तव्यों को अधिकारों के साथ जोड़ा है। विवेकपूर्ण व्यवहार, सहयोग और अपने साथियों के प्रति रुचि, अच्छे नागरिक जीवन की आवश्यक शर्तें हैं। हम में से प्रत्येक के अपने परिवार, पड़ोस, समुदाय और समाज

नागरिकता की भावना

के प्रति कुछ दायित्व हैं। इन दायित्वों का निर्वाह करने के लिए व्यक्ति को कुछ विशेष प्रकार की आदतों और व्यवहारकुशलता का विकास करना होता है। अपने साथी नागरिकों और समाज के प्रति सभी के कुछ कर्तव्य होते हैं।

समाज का सदस्य होने के नाते प्रत्येक व्यक्ति को दूसरों से व्यवहार करते समय अच्छा आचरण, सामाजिक व्यवहार के तौर-तरीके और शिष्टाचार आना चाहिए। यह कानूनी तौर पर आवश्यक नहीं है परंतु हमारे नागरिक जीवन को सुंदर, सहज और व्यवस्थित बनाने के लिए आवश्यक है। आवश्यकता न होने पर बिजली बंद करके इसकी बचत करना, नलों से अनावश्यक रूप से बहते जल को बंद करना, कूड़े को यथोचित स्थान पर डालना, जन सुविधाओं के स्थानों पर पंक्तिबद्ध रहना, सार्वजनिक संपत्ति और ऐतिहासिक स्मारकों की रक्षा करना, दूसरों को असुविधा से बचाने के लिए गाड़ियों को सही स्थान पर खड़ा करना, बीमार अथवा घायलों का जीवन बचाने के लिए रक्तदान करना, आग लगने अथवा अपराध होने की सूचना क्रमशः अग्नि शमन दल और पुलिस को देना, बच्चों, बूढ़ों और विकलांगों का विशेष ध्यान रखना, सभी समुदायों के विभिन्न सामाजिक अवसरों में सम्मिलित होना, संकट अथवा आवश्यकता के समय अपने पड़ोसियों तथा सब की सहायता करना अच्छे व्यवहार के उदाहरण हैं। हमारे दैनिक जीवन में इस प्रकार की सामाजिक मनोवृत्ति को नागरिक भावना कहते हैं। हमें नागरिक जीवन से संबंधित अपने ज्ञान में वृद्धि करनी चाहिए। परस्पर मिलकर कार्य किए बिना कुछ भी प्राप्त नहीं किया जा सकता।

सड़क-सुरक्षा

आजकल सड़कों पर वाहनों का आवागमन दिन-प्रतिदिन बढ़ रहा है। प्रतिवर्ष हज़ारों लोग अपनी या दूसरों की गलती से सड़क दुर्घटनाओं में मर जाते हैं। फलस्वरूप, सड़क-सुरक्षा के प्रति चिंता बढ़ रही है और नागरिक जीवन में यातायात के नियमों की जानकारी पर अधिक ध्यान दिया जा रहा है। यातायात के नियमों का ज्ञान न होने तथा उनका पालन न करने से वाहनों का भीड़ में फँस जाना, दुर्घटनाएँ, घातक चोटें लगना अथवा स्थाई रूप से अपंग हो जाना, जीवन और संपत्ति का नुकसान होना आदि घटनाएँ होती हैं। इन सबको रोकने के लिए यातायात के नियमों के प्रति जागरूकता बढ़ाने तथा जन-जन द्वारा उनका पालन करने की आवश्यकता है। ऐसा करके हम अपना तथा दूसरों का जीवन बचाते हैं।

सड़क पर चलते समय हमें सामने देखना चाहिए तथा आने-जाने वाले वाहनों की गति और यातायात बत्तियों (Traffic lights) के समय का ध्यान रखना चाहिए। सड़क पर चलने वाले अन्य लोगों के प्रति लापरवाही से दुर्घटनाएँ होती हैं। हमें सड़क का प्रयोग करने वाले अन्य लोगों पर

निगाह रखनी चाहिए, विशेषत: पैदल चलने वालों पर क्योंकि उनकी गति धीमी होती है।

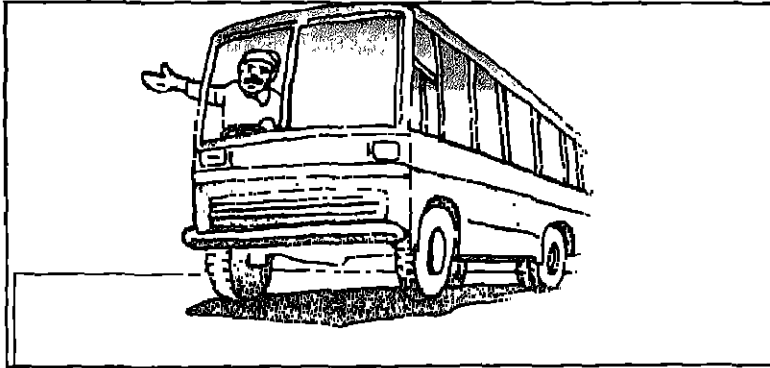
अपने से आगे वाले वाहन से सुरक्षित दूरी बनाए रखनी चाहिए। वाहनों को निश्चित गति सीमा में ही चलाना चाहिए। तेज़ गति से चलते वाहन को रोकते समय दिखाई देने वाली दूरी से गंतव्य स्थान की दूरी अधिक प्रतीत होती है जो दुर्घटना का कारण बनती है। ब्रेक का अचानक प्रयोग नहीं करना चाहिए क्योंकि यह खतरनाक होता है। तुरंत रोकने का सबसे अच्छा तरीका है धीमे चलना अथवा गति को नियंत्रण में रखना।

हमें बड़े और भारी वाहनों से सदैव सुरक्षित दूरी रखनी चाहिए। यदि हमारा वाहन बड़े वाहनों के बीच में फँस जाए तो इसके कुचल जाने की संभावना होती है। लंबे वाहन अधिक स्थान घेरते हैं इसलिए जब यह मुड़ रहे हों तो हमें इनके बाईं अथवा दाईं ओर अधिक निकट नहीं होना चाहिए।

यातायात संकेतक

लाल बत्ती	संकेत करती है कि हमें रुकना चाहिए।
पीली बत्ती	संकेत करती है कि हमें हरी बत्ती की प्रतीक्षा करनी चाहिए।
हरी बत्ती	संकेत करती है कि हमें चलना शुरू करना चाहिए।

हाथ के संकेत

कई बार हाथ के संकेत बहुत आवश्यक होते हैं। ये वाहन से बाहर स्पष्ट दिखने चाहिए ताकि दूसरों को साफ़ दिखाई दें। जब वाहन को धीमा कर रहे हों, तो हमें अपनी बाजू सीधी रखकर तथा हथेली नीचे की ओर करके, इसे ऊपर-नीचे हिलाना चाहिए; जब रुक रहे हों, तो हमें अपनी बाजू का अग्र भाग ऊपर की ओर सीधा उठाना चाहिए; जब दाएँ मुड़ रहे हों, तो हमें अपनी बाजू बिल्कुल सीधी बाहर निकालनी चाहिए तथा हथेली सामने की ओर होनी चाहिए; जब बाएँ मुड़ना हो तो हमें अपनी बाजू बाहर निकाल कर इसे वामावृत्त (anti-clockwise) घुमाना चाहिए।

यातायात के नियम

सड़क के कुछ साधारण नियम हैं — (क) बाईं ओर चलें (ख) दाईं ओर से जाने वालों को रास्ता दें (ग) बाएँ या दाएँ मुड़ते समय संकेत दें (घ) सड़क को बाँटने वाली पीली लाइन को पार न करें (ङ) रोकने वाली लाइन को पार न करें (च)आगे वाले वाहन से पर्याप्त दूरी रखें (छ) दुपहिया वाहन चलाते समय पीछे एक ही सवारी बैठाएँ (ज) किसी से आगे निकलते समय अतिरिक्त सावधानी बरतें (झ) चौराहों पर लाल, पीली और हरी बत्ती के संकेतों का पालन करें (ञ)यदि दुपहिया वाहन चला रहे हों तो हैलमेट का प्रयोग करें और चार पहियों वाली गाड़ी चला रहे हों तो सुरक्षा बैल्ट का प्रयोग करें।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) एक नागरिक और विदेशी में क्या अंतर है?
   (ख) नागरिकता के प्रकार बताइए।
   (ग) अच्छा नागरिक कौन होता है?
   (घ) अच्छे व्यवहार के कुछ उदाहरण दीजिए।
   (ङ) सड़क-सुरक्षा की आवश्यकता क्यों है?
   (च) यातायात के कुछ नियम लिखिए।

2. **निम्नलिखित स्तंभों को मिलाकर सही जोड़े बनाइए**

(क) विदेशी	(अ) हरी बत्ती की प्रतीक्षा करो
(ख) अच्छा नागरिक	(ब) सार्वजनिक संपत्ति
(ग) पीली बत्ती संकेत करती है	(स) अपनी और दूसरों की गलतियों से
(घ) हमें सुरक्षा करनी चाहिए	(द) अच्छा सामाजिक व्यवहार
(ङ) दुर्घटनाएँ होती हैं	(य) किसी अन्य देश का नागरिक

3. **परियोजना कार्य**

   - अपने निकट के पुलिस विभाग की सहायता से यातायात नियमों और सड़क-सुरक्षा पर एक भाषण का आयोजन कीजिए।
   - अपनी कक्षा में हाथ के संकेतों का प्रदर्शन कीजिए।

अध्याय 13

मौलिक अधिकार, कर्तव्य और नीति निदेशक सिद्धांत

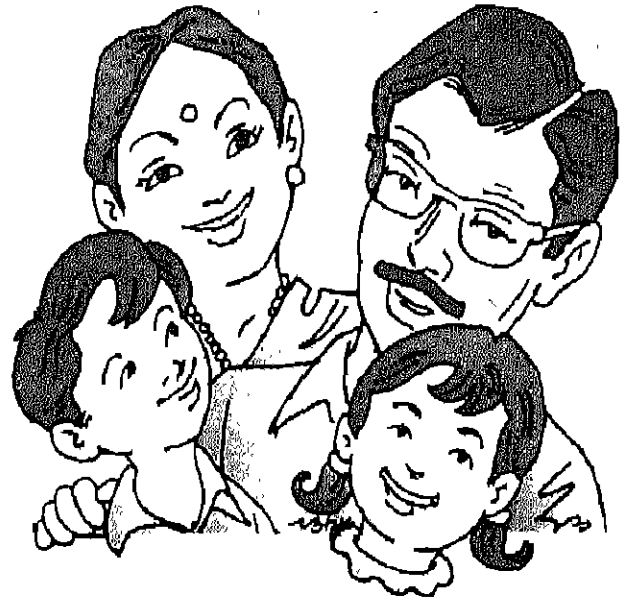
हम भारत के संविधान की प्रस्तावना पढ़ चुके हैं जिसमें लोकतंत्र, समाजवाद और पंथ-निरपेक्षता के आदर्श समाहित हैं। इस वचनबद्धता को पूरा करने के लिए भारत का संविधान मौलिक अधिकार, मौलिक कर्तव्य और राज्य के नीति निदेशक सिद्धांत प्रदान करता है।

मौलिक अधिकार

अच्छे जीवन और आत्म-विकास के लिए अधिकार अत्यंत आवश्यक हैं। एक लोकतांत्रिक देश होने के नाते भारत अपने नागरिकों को ऐसे अधिकार प्रदान करता है जिन्हें मौलिक अधिकार कहते हैं। भारत का संविधान छह मौलिक अधिकारों की गारंटी देता है —

1. समता का अधिकार

इन अधिकारों में पहला अधिकार सभी के लिए समता का अधिकार है। कानून के समक्ष सभी समान हैं। इसका अर्थ है कि कानून धर्म, लिंग, जाति, रंग और मत के आधार पर कोई भेद-भाव नहीं करता। कानून सबकी बराबर रक्षा करता है, यद्यपि राज्य महिलाओं, बच्चों, अनुसूचित जातियों, अनुसूचित जनजातियों तथा सामाजिक और शैक्षणिक दृष्टि से पिछड़े वर्गों के उत्थान के लिए कुछ विशेष कानून बना सकता है।

संविधान ने अस्पृश्यता को समाप्त कर दिया है। अतः अस्पृश्यता अब कानून द्वारा दंडनीय अपराध है। हमारे संविधान ने सैनिक और शिक्षा संबंधी उपाधियों के अतिरिक्त अन्य सभी उपाधियों को समाप्त कर दिया है।

समता का अधिकार

> भारत सरकार द्वारा दिए जाने वाले विभिन्न राष्ट्रीय पुरस्कार कौन-कौन से हैं?

2. स्वतंत्रता का अधिकार

स्वतंत्रता का अधिकार छः आधारभूत स्वतंत्रताओं की गारंटी देता है। एक नागरिक —

- अपने विचार स्वतंत्रतापूर्वक व्यक्त कर सकता है।
- बिना हथियारों के एकत्रित होकर जनसभा कर सकता है।
- कोई संस्था या संघ बना सकता है।
- स्वतंत्रतापूर्वक भ्रमण कर सकता है या भारत के किसी भाग में जा सकता है।
- भारत के किसी भाग में रह अथवा बस सकता है।
- भारत में कहीं भी नौकरी अथवा व्यापार कर सकता है।

इन अधिकारों के अतिरिक्त, शिक्षा के अधिकार सहित प्राण तथा दैहिक स्वतंत्रता के संरक्षण का अधिकार भी है।

स्वतंत्रता का अधिकार

लेकिन असामान्य स्थितियों में इन स्वतंत्रताओं पर कुछ प्रतिबंध लगाए जा सकते हैं। असीमित स्वतंत्रता अव्यवस्था को जन्म देती है। इसलिए राज्य को इन अधिकारों के प्रयोग पर रोक लगाने की शक्ति प्राप्त है।

3. शोषण के विरुद्ध अधिकार

यह अधिकार महिलाओं, बच्चों और गरीबों को शोषण से बचाने का लक्ष्य रखता है। हमारा संविधान मनुष्यों के खरीदने और बेचने पर प्रतिबंध लगाता है। बेगार तथा बंधुआ मजदूरी पर भी प्रतिबंध है।

शोषण के विरुद्ध अधिकार

संविधान यह भी कहता है कि 14 वर्ष से कम आयु के बच्चों को फैक्ट्रियों, खदानों और अन्य खतरनाक नौकरियों में नहीं लगाना चाहिए। बच्चे हमारे समाज की पूँजी हैं। उन्हें शिक्षा प्राप्त करने और प्रसन्नता के वातावरण में अपना बचपन व्यतीत करने का अधिकार है। इसलिए यह आवश्यक है कि सरकार इस प्रकार के शोषण को रोके।

4. धार्मिक स्वतंत्रता का अधिकार

भारत एक पंथ-निरपेक्ष देश है। हमें धर्म की स्वतंत्रता है। प्रत्येक व्यक्ति को अपने धर्म के अनुसार पूजा, उपासना और प्रचार करने का अधिकार है। सरकार के लिए सभी धर्म बराबर हैं और किसी भी धर्म को किसी दूसरे धर्म से अधिक वरीयता नहीं दी जाएगी।

धार्मिक स्वतंत्रता का अधिकार

भारत के विभिन्न धर्मों के एक-एक उत्सव का नाम लिखिए।

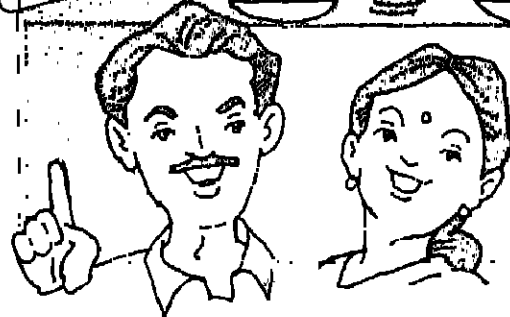
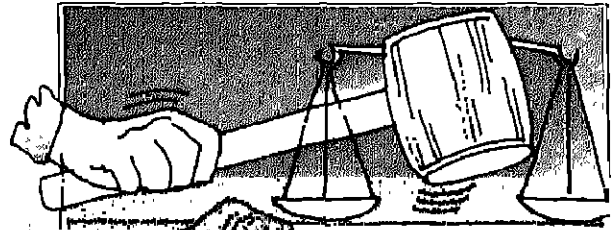
5. संस्कृति और शिक्षा का अधिकार.

यह अधिकार अल्पसंख्यकों के अधिकारों की रक्षा करता है। प्रत्येक समुदाय को अपनी भाषा, लिपि और संस्कृति की रक्षा करने का अधिकार है। यह ऐसे लोगों के समूह को शैक्षिक संस्थाएँ स्थापित और संचालित करने के अधिकार को भी मान्यता देता है।

संस्कृति और शिक्षा का अधिकार

अपने अध्यापक/अध्यापिका से भारतीय संविधान द्वारा मान्य भाषाओं के बारे में जानिए।

6. संवैधानिक उपचारों का अधिकार

नागरिकों को अधिकार देना ही पर्याप्त नहीं है। यह देखना भी उतना ही महत्त्वपूर्ण है कि सरकार हमारे अधिकारों की रक्षा और सम्मान करे। यदि किसी नागरिक को मौलिक अधिकार नहीं दिए जाते या बिना किसी कारण सरकार

संवैधानिक उपचारों का अधिकार

उसके विरुद्ध शक्ति का अन्यायपूर्ण प्रयोग करती है, तो ऐसी स्थिति में नागरिक क्या कर सकता है? संविधान प्रत्येक व्यक्ति को यह अधिकार देता है कि वह अपने अधिकारों को लागू करवाने के लिए उच्च न्यायालय या उच्चतम न्यायालय में जा सकता है।

राज्य के नीति निदेशक सिद्धांत

हमारे संविधान निर्माता जानते थे कि केवल राजनीतिक स्वतंत्रता की प्राप्ति पर्याप्त नहीं थी। उन्होंने अनुभव किया कि आर्थिक असमानताओं, सामाजिक भेद-भाव, गरीबी, अशिक्षा और बेरोज़गारी

से मुक्ति ही समृद्धि के युग की ओर ले जा सकती है। इसलिए उन्होंने लोगों की राजनीतिक, आर्थिक और सामाजिक स्थिति में सुधार के लिए संविधान में कुछ मार्गदर्शक बातें भी शामिल कर दीं। इन मार्गदर्शक बिंदुओं को नीति निदेशक सिद्धांत कहते हैं क्योंकि वास्तव में ये संविधान द्वारा केंद्र तथा राज्य सरकार को दिए गए निर्देश हैं।

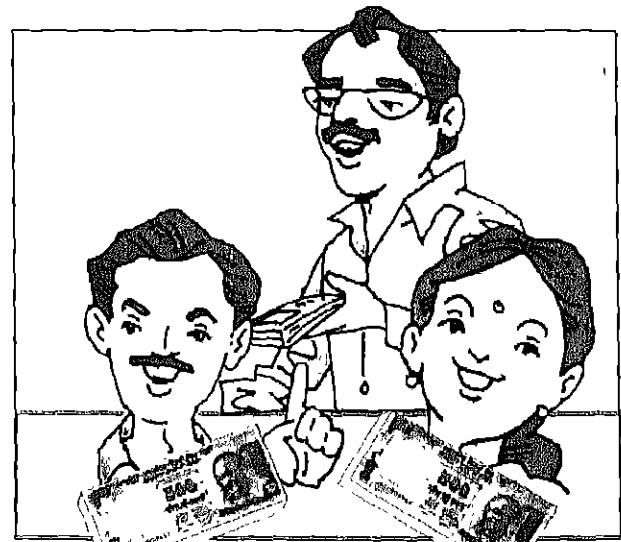
ये नीति निदेशक सिद्धांत सरकार को लोगों के कल्याण तथा देश की सामाजिक और आर्थिक समृद्धि हेतु कार्य करने का निर्देश देते हैं।

धनी और निर्धन के बीच के अंतर को कम करना है। सरकार का यह कर्तव्य है कि धन को कुछ व्यक्तियों के हाथों में केंद्रित होने से रोके। ये नीति निदेशक सिद्धांत एक ऐसे समाज की स्थापना करना चाहते हैं जहाँ सभी नागरिकों को जीविकोपार्जन के पर्याप्त साधनों हेतु अधिकार उपलब्ध हो सकें। इसे भारत के सभी नागरिकों को एक समुचित स्तर का जीवन सुनिश्चित करने हेतु आवश्यक सुविधाएँ व स्थितियाँ प्रदान करनी चाहिए। ये सिद्धांत लोगों के स्वास्थ्य में भी सुधार चाहते हैं तथा नशीले पदार्थ और दवाओं पर प्रतिबंध चाहते हैं। एक अन्य निदेशक सिद्धांत का लक्ष्य 14 वर्ष तक की आयु के बच्चों के लिए निःशुल्क तथा अनिवार्य शिक्षा उपलब्ध कराना है। अन्य सिद्धांतों में महिलाओं और पुरुषों के लिए समान कार्य के लिए समान वेतन भी शामिल है। ये समाज के कमज़ोर वर्गों विशेषतः अनुसूचित जातियों और अनुसूचित जनजातियों के हितों की भी रक्षा करते हैं।

आप जीविकोपार्जन के किन साधनों को पर्याप्त मानेंगे?

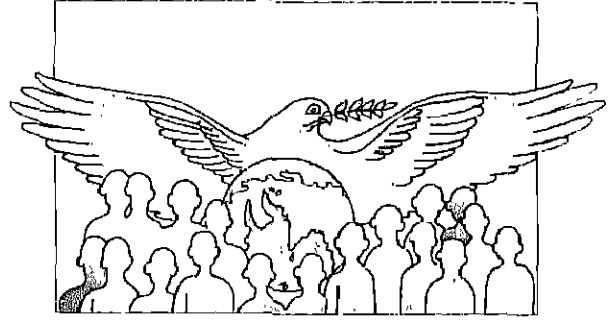
नीति के निदेशक सिद्धांतों में से एक में उल्लेख है कि राज्य को पंचायती राज संस्था को विकसित एवं प्रोन्नत करना चाहिए। जन स्वास्थ्य तथा पशु-पालन पर ध्यान देना चाहिए। गाय तथा अन्य दुधारू पशुओं के वध को रोकना चाहिए। राज्य को हस्तकलाओं तथा कुटीर उद्योगों को भी बढ़ावा देना चाहिए। अंत में अंतर्राष्ट्रीय सुरक्षा और शांति को बढ़ावा देने के लिए भी राज्य को निर्देश दिए गए हैं।

संविधान संशोधन द्वारा लागू किए जाने वाले एक नीति निदेशक सिद्धांत का पता लगाइए।

निःशुल्क और अनिवार्य शिक्षा

समान कार्य के लिए समान वेतन

ग्राम पंचायत को पर्याप्त शक्ति

उपयुक्त स्वास्थ्य सेवाएँ

हस्तकला और कुटीर उद्योगों की प्रोन्नति

अंतर्राष्ट्रीय शांति और सुरक्षा को बढ़ावा

प्रत्येक व्यक्ति को यह ज्ञात होना चाहिए कि मौलिक अधिकार और नीति के निदेशक सिद्धांत एक समान नहीं हैं। यदि मौलिक अधिकारों का हनन किया जाता है तो इन अधिकारों की प्राप्ति के लिए न्यायालय की शरण ली जा सकती है। परंतु यदि नीति निदेशक सिद्धांत लागू नहीं किए जाते तो इन्हें न्यायालय में चुनौती नहीं दी जा सकती।

मौलिक कर्तव्य

मौलिक कर्तव्यों का संबंध भारत के प्रत्येक नागरिक से है। ये मौलिक कर्तव्य यह याद दिलाते हैं कि देश के प्रति नागरिकों के कुछ कर्तव्य हैं। इनका मुख्य उद्देश्य लोगों में देश-भक्ति की भावना को बढ़ावा देना तथा देश को सुदृढ़ बनाने के लिए एक आचार संहिता का पालन करना है। इनके उद्देश्यों में संप्रभुता और एकता की रक्षा करना, विभिन्न कल्याणकारी गतिविधियों को चलाने में सहायता करना तथा समरसता (आपसी सद्भाव) के आदर्शों को बढ़ावा देना भी शामिल हैं। व्यक्तिगत रूप से नागरिकों को स्व-अनुशासन के निश्चित मानकों का पालन तथा दूसरों के अधिकारों का आदर करना चाहिए।

संविधान में उल्लेख है कि प्रत्येक नागरिक को —

- संविधान, राष्ट्र-ध्वज तथा राष्ट्र-गान का सम्मान करना चाहिए।

- स्वतंत्रता आंदोलन के आदर्शों को अपने मन में संजोकर रखना चाहिए।
- भारत की संप्रभुता, एकता और अखंडता को अक्षुण्ण रखना चाहिए।
- देश की रक्षा करनी चाहिए और राष्ट्रीय सेवा करनी चाहिए।
- समरसता और भाई-चारे को बढ़ावा देना चाहिए।
- सामासिक संस्कृति की समृद्ध विरासत को सुरक्षित रखना चाहिए।
- प्राकृतिक पर्यावरण की रक्षा करनी चाहिए तथा उसे बेहतर बनाना चाहिए। साथ ही जीव-जंतुओं के प्रति दया भाव रखना चाहिए।
- वैज्ञानिक दृष्टिकोण और मानवीयता को विकसित करना चाहिए।
- सार्वजनिक संपत्ति की रक्षा करनी चाहिए तथा हिंसा का परित्याग करना चाहिए।
- उत्कृष्टता के लिए प्रयास करना चाहिए।

ये दस मौलिक कर्तव्य हम सबको एकता के सूत्र में बाँधने वाले दस आदेश हैं। हमें यह अनुभव करना चाहिए कि जहाँ हमारे पास कुछ अधिकार हैं, वहीं दूसरी ओर देश के प्रति हमारे कुछ कर्तव्य और दायित्व भी हैं।

अभ्यास

1. निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए

(क) संविधान द्वारा दिए गए मौलिक अधिकारों का उल्लेख कीजिए।
(ख) भारत के नागरिकों की किन्हीं चार स्वतंत्रताओं का उल्लेख कीजिए।
(ग) समाज के कमज़ोर वर्गों को कौन-सी विशेष सुविधाएँ प्रदान की गई हैं और क्यों?
(घ) न्यायालयों को नागरिकों के अधिकारों का संरक्षक क्यों कहा जाता है?
(ङ) राज्य के नीति निदेशक सिद्धांतों से आप क्या समझते हैं?
(च) मौलिक अधिकारों और राज्य के नीति निदेशक सिद्धातों में अंतर स्पष्ट कीजिए।
(छ) एक नागरिक के किन्हीं पाँच मौलिक कर्तव्यों का उल्लेख कीजिए।
(ज) निम्नलिखित को समझाइए —
- समता का अधिकार।
- धार्मिक स्वतंत्रता का अधिकार।
- प्राकृतिक पर्यावरण की सुरक्षा।

2. सही कथनों पर (✓) का चिह्न लगाइए

(क) भारत में सभी धर्मों को बराबर माना जाता है।
(ख) स्वतंत्रता का अधिकार असीमित है।
(ग) राज्य के नीति निदेशक सिद्धांत कल्याणकारी राज्य के आदर्श निश्चित करते हैं।
(घ) अधिकार और कर्तव्य एक ही सिक्के के दो पहलू हैं।
(ङ) संविधान ने अस्पृश्यता को समाप्त कर दिया है।

3. परियोजना कार्य

- मौलिक कर्तव्यों का एक चार्ट बनाकर अपनी कक्षा में लगाइए।

अध्याय 14

केंद्रीय सरकार

हम पहले ही पढ़ चुके हैं कि प्रत्येक देश के संविधान में कुछ मौलिक नियम होते हैं. जिनके अनुसार देश शासित होता है। संविधान में दिए गए मौलिक नियमों के अनुसार कानून कौन बनाता है? उनका क्रियान्वयन कौन करता है? उनकी व्याख्या कौन करता है? यह कार्य उस देश की सरकार के विभिन्न अंगों द्वारा किया जाता है।

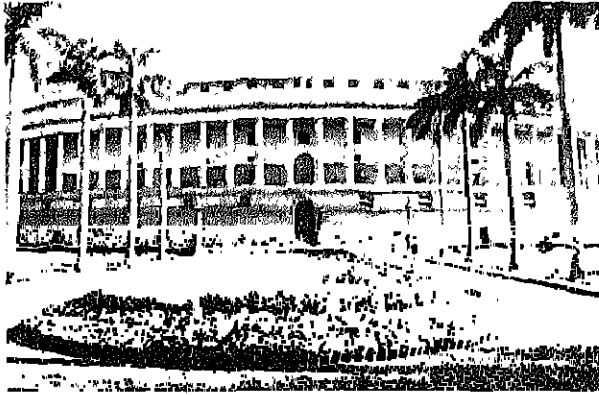
प्रत्येक सरकार की भाँति, भारतीय सरकार के भी तीन अंग हैं — विधायिका, कार्यपालिका और न्यायपालिका। वह अंग जो कानून बनाता है, 'विधायिका' कहलाता है। भारत में इसे हम संसद कहते हैं। इसके दो सदन हैं, पहला लोक सभा तथा दूसरा राज्य सभा। संसद पूरे देश के लिए कानून बनाती है। वह अंग जो इन कानूनों को लागू या क्रियान्वित करता है, उसे 'कार्यपालिका' कहते हैं। राष्ट्रपति, प्रधानमंत्री तथा मंत्रि-परिषद् से हमारी सरकार की कार्यपालिका गठित होती है। वह अंग जो इन कानूनों के आधार पर विवादों पर निर्णय लेता है, उसे 'न्यायपालिका' कहते हैं। सर्वोच्च या उच्चतम न्यायालय, उच्च न्यायालय और अन्य अधीनस्थ न्यायालय सरकार के तीसरे अंग में सम्मिलित हैं।

हमें पहले से ही ज्ञात है कि हमारे संविधान में लोकतांत्रिक सरकार का प्रावधान किया गया है। इसमें द्विस्तरीय शासन व्यवस्था है — एक केंद्र में तथा दूसरी राज्यों में। केंद्र की सरकार को संघीय अथवा केंद्रीय सरकार कहते हैं। संघीय सरकार में संसद, राष्ट्रपति, प्रधानमंत्री और उसकी मंत्रि-परिषद् होती है।

हमारे देश में कानून संघीय तथा राज्य स्तर पर बनते हैं। हमारे संविधान में तीन विषय सूचियों का प्रावधान है — संघीय सूची, राज्य सूची और समवर्ती सूची। संघीय सूची में 97 विषय हैं। इन विषयों पर केवल भारत की संसद ही कानून बना सकती है। राज्य सूची में 66 विषय हैं जिन पर केवल राज्य सरकार ही कानून बना सकती है। इनके अतिरिक्त समवर्ती सूची में 47 विषय हैं जिन पर संसद और राज्य विधायिकाएँ, दोनों को कानून बनाने का अधिकार है। यदि केंद्र और राज्य दोनों समवर्ती सूची के एक ही विषय पर कानून बनाते हैं और दोनों में टकराव हो जाता है, तो ऐसी स्थिति में केंद्रीय कानून को राज्य के कानून पर वरीयता मिलेगी। अन्य विषय, जो इन तीनों सूचियों में सम्मिलित नहीं हैं, अवशिष्ट शक्तियाँ कहलाते हैं। भारत

में इन विषयों पर कानून बनाने की शक्ति केंद्रीय सरकार को दी गई है।

संसद

केंद्रीय स्तर पर हमारी विधायिका को संसद अथवा पार्लियामेंट कहते हैं। राष्ट्रपति, लोक सभा और राज्य सभा को मिलाकर संसद बनती है। यह देश में कानून बनाने वाली सर्वोच्च संस्था है। दो सदन होने के कारण इसे द्विसदनीय संसद कहते हैं। उच्च सदन को राज्य सभा अथवा 'कौंसिल ऑफ स्टेट्स' कहते हैं। निम्न सदन को लोक सभा अथवा 'हाउस ऑफ पीपुल' कहा जाता है।

संसद भवन का एक दृश्य

लोक सभा और राज्य सभा

लोक सभा में अधिकतम 550 चुने हुए सदस्य हो सकते हैं। इनमें से अधिकतम 20 सदस्य संघ शासित क्षेत्रों से हो सकते हैं। राष्ट्रपति एंग्लोइंडियन समुदाय के दो सदस्यों को, यदि उन्हें चुनावों में पर्याप्त प्रतिनिधित्व न मिला हो, मनोनीत कर सकता है। लोक सभा की कार्यावधि पाँच वर्ष है।

लोक सभा का सदस्य बनने के लिए व्यक्ति को भारत का नागरिक होना चाहिए और उसकी आयु 25 वर्ष से कम नहीं होनी चाहिए। लोक सभा का एक अध्यक्ष और एक उपाध्यक्ष होता है। दोनों का चुनाव सदन द्वारा अपने ही सदस्यों में से किया जाता है।

राज्य सभा के 250 सदस्य होते हैं। इनमें से 238 राज्यों तथा संघ शासित क्षेत्रों के प्रतिनिधि होते हैं। अन्य 12 को राष्ट्रपति मनोनीत करता है। एक व्यक्ति जो भारत का नागरिक है तथा जिसकी आयु 30 वर्ष या उससे अधिक है राज्य सभा का सदस्य चुना जा सकता है। राज्य सभा के सदस्यों का चुनाव राज्यों की विधान सभाओं द्वारा किया जाता है। मनोनीत सदस्य साहित्य, विज्ञान, कला और समाज सेवा के क्षेत्र में विशेष ख्याति रखने वाले व्यक्ति होते हैं।

राज्य सभा स्थाई सदन है क्योंकि यह भंग नहीं की जा सकती। प्रत्येक दो वर्षों के बाद एक तिहाई सदस्यों का सेवाकाल पूरा हो जाता है और उनके स्थान पर नए सदस्य चुने जाते हैं। राज्य सभा के सदस्यों की कार्यावधि छः वर्ष है।

राज्य सभा का एक सभापति और एक उपसभापति होता है। भारत का उपराष्ट्रपति राज्यसभा का पदेन सभापति होता है। उपसभापति का चुनाव सदन द्वारा अपने ही सदस्यों में से किया जाता है।

कानून कैसे बनता है

कानून बनाने के लिए एक प्रस्ताव को विधेयक के रूप में किसी भी सदन में प्रस्तुत किया जा सकता है। विधेयक दो प्रकार के होते हैं– वित्त विधेयक और साधारण विधेयक। आय

और व्यय से संबंधित विधेयक को वित्त विधेयक कहते हैं। वित्त विधेयक केवल लोक सभा में ही प्रस्तुत किया जा सकता है। साधारण विधेयक को किसी भी सदन में प्रस्तुत किया जा सकता है। जब दोनों सदन एक विधेयक को पारित कर देते हैं तब इसे राष्ट्रपति के पास उसके हस्ताक्षर के लिए भेजा जाता है और राष्ट्रपति के हस्ताक्षर के बाद विधेयक कानून बन जाता है। संसद का मुख्य कार्य कानून पारित करना है। यहीं देश की सरकार की नीतियों पर चर्चा होती है।

राष्ट्रपति

भारतीय संघ की कार्यपालिका का मुखिया राष्ट्रपति है। सरकार का समस्त कार्य राष्ट्रपति के नाम से किया जाता है, यद्यपि वास्तव में निर्णय प्रधानमंत्री के नेतृत्व में मंत्रि-परिषद् द्वारा लिए जाते हैं।

राष्ट्रपति बनने के लिए व्यक्ति को भारत का नागरिक होना चाहिए तथा उसकी आयु 35 वर्ष से कम नहीं होनी चाहिए। राष्ट्रपति का चुनाव संसद और विधान सभाओं के निर्वाचित सदस्य करते हैं। राष्ट्रपति का निर्वाचन पाँच वर्ष के लिए किया जाता है। वह दूसरी बार के लिए चुनाव लड़ सकता है। आम चुनावों के बाद संसद के पहले अधिवेशन को राष्ट्रपति संबोधित करता है। प्रत्येक वर्ष का पहला अधिवेशन भी राष्ट्रपति के अभिभाषण के साथ प्रारंभ होता है।

राष्ट्रपति की शक्तियाँ

राष्ट्रपति के पास संघीय सरकार के उच्चाधिकारियों को नियुक्त करने तथा हटाने की शक्ति है। वह, राज्य के राज्यपालों, एटार्नी जनरल (महाधिवक्ता), मुख्य चुनाव आयुक्त एवं अन्य चुनाव आयुक्तों, उच्चतम न्यायालय के मुख्य न्यायाधीश एवं अन्य न्यायाधीशों, उच्च न्यायालय के मुख्य न्यायाधीश एवं अन्य न्यायाधीशों, संघ लोक सेवा आयोग के अध्यक्ष एवं अन्य सदस्यों की नियुक्ति करता है। संघ शासित क्षेत्रों का प्रशासन सीधे उसके नियंत्रण में होता है। देश का मुखिया होने के नाते वह राजदूतों को नियुक्त करता है तथा विदेशों के राजदूतों के नियुक्ति-पत्र स्वीकार करता है। राष्ट्रपति भारत की सेनाओं का सर्वोच्च सेनापति होता है। वह दूसरे देशों से युद्ध की घोषणा तथा संधियाँ और समझौते कर सकता है। राष्ट्रपति के पास क्षमादान करने की भी शक्ति होती है। जब संसद की बैठक न चल रही हो तब वह अध्यादेश जारी कर सकता है। अध्यादेश भी कानून के समान शक्ति रखता है।

राष्ट्रपति के पास किसी प्रकार की असामान्य स्थिति से निपटने के लिए महत्त्वपूर्ण आपातकालीन शक्तियाँ होती हैं। यदि भारत की सुरक्षा को युद्ध अथवा सशस्त्र विद्रोह का खतरा हो तो राष्ट्रपति पूरे देश के लिए आपातकाल की घोषणा कर सकता है। दूसरे, यदि किसी राज्य में सरकार संविधान के प्रावधानों के अनुरूप नहीं चल रही हो तो राष्ट्रपति उस राज्य में आपातकाल की घोषणा कर सकता है। राष्ट्रपति राज्य कार्यपालिका का सारा कार्य संभाल सकता है और विधान सभा को निलंबित कर सकता है। इसे राष्ट्रपति शासन कहते हैं।

तीसरे, यदि राष्ट्रपति को इसका विश्वास हो जाए कि देश के वित्तीय स्थायित्व को खतरा है तो वह वित्तीय आपातकाल की घोषणा कर सकता है। राष्ट्रपति इन सारी शक्तियों का प्रयोग प्रधानमंत्री तथा मंत्रि-परिषद् की सहायता और सलाह से करता है।

प्रधानमंत्री

हम जानते हैं कि राष्ट्रपति इन सारी शक्तियों का प्रयोग प्रधानमंत्री तथा मंत्रि-परिषद् के परामर्श से करता है। इसलिए वास्तविक कार्यपालिका की शक्ति मंत्रि-परिषद् में निहित है।

मंत्रि-परिषद् तथा केंद्रीय सरकार का वास्तविक मुखिया प्रधानमंत्री होता है। राष्ट्रपति, लोक सभा में बहुमत प्राप्त दल के नेता को प्रधानमंत्री नियुक्त करता है। यदि किसी अकेले दल को बहुमत प्राप्त न हो तो दो या अधिक दल आपस में मिलकर एक नेता चुन सकते हैं। ऐसी सरकार को 'मिली-जुली (संयुक्त) सरकार' कहते हैं। इस प्रकार से चुने हुए नेता को राष्ट्रपति द्वारा प्रधानमंत्री नियुक्त किया जाता है।

प्रधानमंत्री सरकार का नेता होता है। प्रधानमंत्री की सलाह पर राष्ट्रपति मंत्रियों को नियुक्त कर सकता है अथवा हटा सकता है। टीम का कैप्टन होने के नाते प्रधानमंत्री किसी को भी अपनी मंत्रि-परिषद् में शामिल कर सकता है अथवा हटा सकता है। यदि प्रधानमंत्री त्याग-पत्र देता है तो पूरी मंत्रि-परिषद् को जाना पड़ता है।

> भारत के पहले प्रधानमंत्री कौन थे? वह कितने समय तक प्रधानमंत्री रहे?

प्रधानमंत्री सरकार की नीतियों का प्रमुख प्रवक्ता होता है। उसे देश के भविष्य का निर्माण करना होता है। इसलिए सरकार की सफलता अथवा असफलता का बोझ प्रधानमंत्री के कंधों पर होता है।

मंत्रि-परिषद्

मंत्रि-परिषद् में तीन प्रकार के मंत्री होते हैं — कैबिनेट (मंत्रि-मंडल) मंत्री, राज्य मंत्री और उपमंत्री। सभी महत्त्वपूर्ण निर्णय मंत्रि-मंडल द्वारा लिए जाते हैं। मंत्रि-मंडल के निर्णय अन्य सभी मंत्रियों के लिए बाध्य होते हैं।

प्रत्येक मंत्री को राज्य सभा अथवा लोक सभा का सदस्य होना चाहिए। यदि किसी ऐसे व्यक्ति को मंत्री बनाया जाता है जो संसद का सदस्य नहीं है, तो उसे अपनी नियुक्ति के छः महीने के भीतर लोक सभा या राज्य सभा का सदस्य बनना अनिवार्य है। मंत्रि-परिषद् तब तक सत्ता में रहती है जब तक इसे लोक सभा का बहुमत प्राप्त रहता है।

भारत की न्यायपालिका : उच्चतम न्यायालय

केंद्र और राज्य दोनों के लिए भारत में एकीकृत एवं स्वतंत्र न्यायपालिका है। उच्चतम न्यायालय भारत की शीर्षस्थ न्यायपालिका है। इसमें एक मुख्य न्यायाधीश और 25 अन्य न्यायाधीश होते हैं। उच्चतम न्यायालय के न्यायाधीशों की संख्या समय-समय पर भारतीय संसद निर्धारित करती है। भारत का राष्ट्रपति मुख्य न्यायाधीश एवं अन्य न्यायाधीशों की नियुक्ति करता है। उच्चतम न्यायालय के न्यायाधीश के रूप में नियुक्ति के लिए व्यक्ति को भारत का नागरिक

होना चाहिए तथा उसकी आयु 65 वर्ष से कम होनी चाहिए। साथ ही, वह किसी उच्च न्यायालय में कम से कम 5 वर्षों तक न्यायाधीश के पद पर रहा हो या किसी उच्च न्यायालय अथवा उच्चतम न्यायालय में कम से कम 10 वर्षों से वकालत कर रहा हो या राष्ट्रपति की दृष्टि में एक प्रसिद्ध न्यायविद् हो।

उच्चतम न्यायालय के क्षेत्राधिकार तीन प्रकार के होते हैं – प्रारंभिक क्षेत्राधिकार, अपीलीय क्षेत्राधिकार और परामर्श क्षेत्राधिकार।

- प्रारंभिक क्षेत्राधिकार के अंतर्गत उच्चतम न्यायालय निम्न मुकदमों की सुनवाई कर सकता है – (क) जिसमें एक ओर भारत सरकार हो तथा दूसरी ओर एक या अनेक राज्य हों, (ख) जिसमें एक ओर भारत सरकार और कोई एक अथवा अनेक राज्य हों तथा दूसरी ओर एक या अनेक राज्य हों, (ग) जिसमें दो अथवा दो से अधिक राज्य शामिल हों। साथ ही, भारत का कोई नागरिक अपने मूल अधिकारों की रक्षा के लिए प्रत्यक्ष रूप में उच्चतम न्यायालय का दरवाज़ा खटखटा सकता है।
- अपीलीय क्षेत्राधिकार के अंतर्गत उच्चतम न्यायालय भारत का शीर्ष अपीलीय न्यायालय है। यह संवैधानिक, दीवानी और फ़ौजदारी मामलों में उच्च न्यायालयों के निर्णयों के विरुद्ध अपील सुन सकता है।
- परामर्श क्षेत्राधिकार के अंतर्गत राष्ट्रपति किसी विधि पर या सार्वजनिक महत्त्व के किसी तथ्य पर उच्चतम न्यायालय से परामर्श ले सकते हैं। यद्यपि ऐसे किसी परामर्श को मानने के लिए राष्ट्रपति बाध्य नहीं होता।

संविधान के संरक्षण और व्याख्या के लिए उच्चतम न्यायालय अंतिम और सर्वोपरि न्यायालय है। यह व्यक्तियों के मूल अधिकारों का संरक्षक है। यह संसद एवं राज्य विधायिकाओं द्वारा पारित अधिनियमों का पुनरावलोकन कर सकता है और ऐसे किसी भी कानून को अवैध घोषित कर सकता है जो संविधान के प्रावधानों के विरुद्ध हों।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) राज्य सभा और लोक सभा की रचना का वर्णन कीजिए।

   (ख) अवशिष्ट शक्तियों का क्या अर्थ है?

   (ग) विधेयक किस प्रकार कानून बनता है? विधेयक पर अंत में कौन हस्ताक्षर करता है?

   (घ) भारतीय संघ का मुख्य कार्यकारी कौन है?

(ङ) राष्ट्रपति की शक्तियाँ क्या हैं?
(च) मंत्रि-परिषद् का मुखिया कौन होता है?
(छ) एक मिली-जुली (संयुक्त) सरकार के बारे में आप क्या जानते हैं?
(ज) प्रधानमंत्री की स्थिति क्यों महत्त्वपूर्ण है?
(झ) उच्चतम न्यायालय का परामर्श क्षेत्राधिकार क्या है?

2. निम्नलिखित स्तंभों को मिलाकर सही जोड़े बनाइए

(क) लोक सभा सदस्य	(अ) 97
(ख) संघीय सूची के विषय	(ब) 550
(ग) समवर्ती सूची के विषय	(स) 250
(घ) राज्य सभा सदस्य	(द) 66
(ङ) राज्य सूची के विषय	(य) 47

3. परियोजना कार्य

- अब तक बने भारत के राष्ट्रपतियों और प्रधानमंत्रियों के नामों की सूची बनाइए।
- भारत के दस राजनीतिक दलों की सूची बनाइए।
- शिक्षक कक्षा के विद्यार्थियों द्वारा युवा संसद का आयोजन कराएँ।

अध्याय 15

राज्य सरकार

पिछले अध्याय में हम पढ़ चुके हैं कि केंद्रीय और राज्य सरकारों के बीच शक्तियों का विभाजन किया गया है और अपने-अपने क्षेत्र में दोनों स्वतंत्र हैं। परंतु केंद्रीय सरकार की शक्तियाँ और संसाधन अधिक हैं। राज्य आर्थिक सहायता के लिए केंद्र पर निर्भर हैं।

केंद्रीय सरकार, संघीय सूची में सम्मिलित विषयों जैसे — रक्षा, विदेशी मामले, मुद्रा, रेलवे, संचार, बैंकिंग, डाक और तार इत्यादि पर कानून बना सकती है। इसी प्रकार राज्य सूची में पुलिस, कृषि, भू-राजस्व, मछली-पालन जैसे विषय सम्मिलित हैं।

राज्य के कानून राज्य विधायिका द्वारा बनाए जाते हैं। राज्यों में इन कानूनों का क्रियान्वयन राज्य कार्यपालिका द्वारा किया जाता है। स्थानीय स्तर पर पंचायती राज व्यवस्था भी है। इसके अंतर्गत गाँवों और कस्बों की अपनी सरकारें होती हैं जिन्हें वहाँ के स्थानीय लोग स्वयं चलाते हैं।

राज्य विधायिका

राज्यों की विधायिका दो प्रकार की होती है। कुछ राज्यों में द्विसदनीय विधायिका है — विधान सभा और विधान परिषद्। अधिकांश भारतीय राज्यों में एक सदनीय विधायिका है जिसे विधान सभा कहते हैं। राज्यपाल भी विधायिका का एक अंग होता है।

उन राज्यों की सूची बनाइए जहाँ दो सदन हैं।

किसी राज्य की विधान सभा में सदस्यों की संख्या 500 से अधिक नहीं हो सकती, यद्यपि विधान सभा के सदस्यों की संख्या संबंधित राज्य के आकार और जनसंख्या के आधार पर अलग-अलग होती है। विधान सभा का कार्यकाल पाँच वर्ष का होता है। लोक सभा की भाँति राज्यों में विधान सभा, विधान परिषद् से अधिक शक्तिशाली होती है।

किसी राज्य की विधान परिषद् उस राज्य की विधान सभा के सदस्यों की संख्या के एक तिहाई से अधिक नहीं हो सकती। विधान परिषद् एक स्थाई सदन है। इसको भंग नहीं किया जा सकता। प्रत्येक दो वर्षों के बाद इसके एक तिहाई सदस्य सेवामुक्त हो जाते हैं। प्रत्येक सदस्य की कार्यावधि छः वर्ष होती है।

राज्य विधायिका का सदस्य होने के लिए व्यक्ति को भारत का नागरिक होना चाहिए और विधान सभा के लिए आयु कम-से-कम 25 वर्ष तथा विधान परिषद् के लिए 30 वर्ष से कम नहीं होनी चाहिए।

विधान सभा का एक अध्यक्ष और एक उपाध्यक्ष होता है। इसी प्रकार विधान परिषद् का सभापति और उपसभापति होता है। वे अपने-अपने सदन की बैठकों की अध्यक्षता करते हैं और उसका कार्य संचालन करते हैं।

जैसा केंद्र में है, विधेयक के रूप में प्रस्ताव विधान सभा अथवा विधान परिषद् (यदि विधान परिषद् है) में प्रस्तुत किया जा सकता है। लेकिन वित्त विधेयक के मामले में इसे केवल विधान सभा में ही प्रस्तुत किया जा सकता है। बहस के बाद जब विधेयक पारित हो जाता है तो इसे राज्यपाल के पास हस्ताक्षर के लिए भेजा जाता है। राज्यपाल के हस्ताक्षर के बाद यह कानून बन जाता है।

राज्यपाल

प्रत्येक राज्य का एक राज्यपाल होता है। राज्यपाल की नियुक्ति राष्ट्रपति द्वारा की जाती है। राष्ट्रपति एक ही व्यक्ति को एक से अधिक राज्यों का राज्यपाल नियुक्त कर सकता है। साधारणतया राज्यपाल उस राज्य से नहीं होना चाहिए जहाँ उसे नियुक्त किया गया हो। राज्यपाल नियुक्त करते समय राष्ट्रपति प्रधानमंत्री की सलाह लेता है।

आपके राज्य का राज्यपाल कौन है? यह पता करें कि वह किस राज्य के हैं।

पिछले अध्याय में हम पढ़ चुके हैं कि केंद्र में समस्त प्रशासन राष्ट्रपति के नाम पर चलाया जाता है। इसी प्रकार राज्य में शासन राज्यपाल के नाम पर चलाया जाता है, लेकिन वास्तविक कार्यपालिका मुख्यमंत्री तथा उसकी मंत्रि-परिषद् होती है।

राज्यपाल की अधिकांश शक्तियाँ और कार्य भारत के राष्ट्रपति जैसे ही हैं। राज्यपाल राज्य के सभी उच्च अधिकारियों की नियुक्ति करता है। वह विधान सभा में बहुमत दल के नेता को मुख्यमंत्री नियुक्त करता है। अन्य मंत्रियों की नियुक्ति राज्यपाल मुख्यमंत्री की सलाह से करता है। महा-अधिवक्ता, उच्च न्यायालय के न्यायाधीश, राज्य लोक सेवा आयोग के अध्यक्ष एवं सदस्यों की नियुक्ति भी राज्यपाल ही करता है।

साधारणतया राज्यपाल मुख्यमंत्री की सलाह पर काम करता है, लेकिन विभिन्न महत्त्वपूर्ण परिस्थितियों में राज्यपाल को अपने विवेक का प्रयोग कर स्वतंत्र निर्णय लेने होते हैं। इन शक्तियों को 'स्वविवेकी शक्तियाँ' कहते हैं। उदाहरण के लिए जब किसी एक दल को विधान सभा में स्पष्ट बहुमत नहीं मिलता, तब मुख्यमंत्री नियुक्त करने में राज्यपाल अपने विवेक का प्रयोग कर सकता है।

राज्यपाल के पास विधान सभा को संबोधित करने तथा इसे संदेश भेजने की शक्ति है। आम चुनावों के बाद विधान सभा का प्रथम अधिवेशन राज्यपाल के संबोधन के साथ प्रारंभ होता है। प्रत्येक वर्ष के प्रथम सत्र को भी राज्यपाल संबोधित करता है।

मुख्यमंत्री की सलाह पर राज्यपाल विधान सभा का अधिवेशन बुला सकता है और भंग कर सकता है।

राज्यपाल की एक अन्य महत्त्वपूर्ण शक्ति विधान सभा द्वारा पारित प्रत्येक विधेयक को स्वीकृति देना है। वह किसी भी विधेयक को राष्ट्रपति के विचारार्थ कुछ समय के लिए आरक्षित कर सकता है। जब कभी किसी कानून की तुरंत आवश्यकता हो तब राज्यपाल स्वयं कुछ आदेश दे सकता है। इन आदेशों को अध्यादेश कहते हैं। राज्यपाल ऐसे अध्यादेश तभी जारी कर सकता है जब विधान सभा का सत्र न चल रहा हो।

राज्यपाल राज्य के कानूनों के अंतर्गत दी गई सज़ा को माफ़ कर सकता है। वह सज़ा को कम भी कर सकता है।

मुख्यमंत्री और मंत्रि-परिषद्

केंद्र में प्रधानमंत्री, राष्ट्रपति को सलाह (परामर्श) और सहायता देता है। उसी प्रकार राज्य में राज्यपाल मुख्यमंत्री की सलाह और सहायता से कार्य करता है।

हम पहले पढ़ चुके हैं कि बहुमत प्राप्त दल के नेता को, जिसे विधान सभा का विश्वास मत प्राप्त है, राज्यपाल मुख्यमंत्री नियुक्त करता है। मुख्यमंत्री नियुक्त हो जाने के बाद वह राज्यपाल को अन्य मंत्रियों को नियुक्त करने में सलाह देता है। मुख्यमंत्री तथा अन्य मंत्रियों से मंत्रि-परिषद् बनती है।

> आपके राज्य का मुख्यमंत्री कौन है? क्या राज्य मंत्रि-मंडल में आपके क्षेत्र से कोई मंत्री है?

मुख्यमंत्री राज्य सरकार का अति महत्त्वपूर्ण अधिकारी है और संपूर्ण मंत्रि-परिषद् के कार्यों को देखता है। वह अपने मंत्रि-मंडल में किसी को भी सम्मिलित कर सकता है अथवा हटा सकता है। मुख्यमंत्री का त्याग-पत्र पूरे मंत्रि-परिषद् का त्याग-पत्र माना जाता है। विधान सभा में अविश्वास प्रस्ताव पारित होने पर मुख्यमंत्री सहित मंत्रि-परिषद् स्वतः अपदस्थ हो जाती है। राज्यपाल और मंत्रि-परिषद् के बीच मुख्यमंत्री एक महत्त्वपूर्ण कड़ी है।

राज्यों की न्यायपालिका : उच्च न्यायालय

राज्य स्तर पर न्यायिक प्रशासन के शीर्ष पर उच्च न्यायालय स्थित है। संसद विधि द्वारा किसी राज्य या केंद्र-शासित प्रदेश अथवा दो या दो से अधिक राज्यों के लिए एक ही उच्च न्यायालय का गठन कर सकता है।

> दिल्ली का अपना एक उच्च न्यायालय है। पंजाब, हरियाणा तथा चंडीगढ़ के लिए एक ही चंडीगढ़ उच्च न्यायालय है। दूसरी ओर, उत्तर-पूर्व भारत के सात राज्यों-असम, अरुणाचल प्रदेश, मेघालय, मणिपुर, त्रिपुरा, नागालैंड एवं मिज़ोरम के लिए एक ही गुवाहाटी उच्च न्यायालय है।

प्रत्येक उच्च न्यायालय में एक मुख्य न्यायाधीश एवं कई अन्य न्यायाधीश होते हैं। उच्च न्यायालय के मुख्य न्यायाधीश की नियुक्ति राष्ट्रपति उच्चतम न्यायालय के मुख्य न्यायाधीश और संबद्ध राज्यों के राज्यपाल के परामर्श से करते हैं। अन्य न्यायाधीशों की नियुक्ति के समय राष्ट्रपति भारत के मुख्य न्यायाधीश के साथ-साथ संबद्ध उच्च न्यायालय के मुख्य

न्यायाधीश और राज्यपाल से भी विचार-विमर्श करते हैं।

उच्च न्यायालय के न्यायाधीश के रूप में नियुक्ति के लिए व्यक्ति को भारत का नागरिक होना चाहिए तथा उसकी आयु 62 वर्ष से कम होनी चाहिए। साथ ही वह कम से कम 10 वर्षों तक न्यायिक अधिकारी रहा हो अथवा कम से कम 10 वर्षों तक किसी उच्च न्यायालय में वकालत कर चुका हो।

उच्च न्यायालय के क्षेत्राधिकार दो प्रकार के हैं – प्रारंभिक क्षेत्राधिकार तथा अपीलीय क्षेत्राधिकार।

- उच्च न्यायालय को विवाह, तलाक, वसीयत तथा कुछ राजस्व संबंधी मामलों में **प्रारंभिक क्षेत्राधिकार** प्राप्त हैं। उच्च न्यायालय व्यक्तियों के मूल अधिकारों से संबंधित मुकदमों की भी सुनवाई कर सकता है।
- **अपीलीय क्षेत्राधिकार** के अंतर्गत, फ़ौजदारी मामलों में उच्च न्यायालय ज़िला सत्र न्यायाधीशों के निर्णयों के विरुद्ध अपीलों की सुनवाई करता है। अधीनस्थ न्यायालयों द्वारा दिए गए मृत्यु दंड की पुष्टि उच्च न्यायालय द्वारा की जाती है। अधिक धनराशि से संबंधित मुकदमों की अपीलों की सुनवाई उच्च न्यायालय में की जा सकती है।

उच्च न्यायालय को अपने अधीनस्थ न्यायालयों के न्यायिक तथा प्रशासकीय मामलों पर अधीक्षण की शक्ति प्राप्त है।

प्रत्येक ज़िले में एक ज़िला न्यायालय होता है। ज़िले का न्यायिक अधिकारी दीवानी मुकदमे की सुनवाई करते हुए ज़िला न्यायाधीश कहलाता है तथा फ़ौजदारी मुकदमे की सुनवाई करते हुए वह सत्र न्यायाधीश कहलाता है। इसके अतिरिक्त अन्य अधीनस्थ न्यायालय भी होते हैं।

केंद्र शासित क्षेत्र

केंद्र शासित क्षेत्र प्राय: आकार और जनसंख्या की दृष्टि से छोटे होते हैं। इसी कारण उन्हें राज्य का दर्जा नहीं दिया जाता। केंद्र शासित क्षेत्रों में सीधे केंद्र सरकार का प्रशासन होता है। केंद्र शासित क्षेत्र का प्रशासन राष्ट्रपति द्वारा नियुक्त प्रशासनिक अधिकारी द्वारा चलाया जाता है। इस प्रशासनिक अधिकारी को मुख्य आयुक्त अथवा उपराज्यपाल कहते हैं।

किसी केंद्र शासित क्षेत्र में विधान सभा तथा मुख्यमंत्री के नेतृत्व में मंत्रि-परिषद् हो सकती है।

केंद्र शासित क्षेत्र दिल्ली को विशेष दर्जा प्राप्त है। इसे राष्ट्रीय राजधानी क्षेत्र कहा जाता है। उपराज्यपाल इसका प्रशासनिक मुखिया है। यहाँ एक निर्वाचित विधान सभा तथा मंत्रि-परिषद् भी है।

भारत के दक्षिण के किसी केंद्र शासित क्षेत्र का नाम बताइए जहाँ निर्वाचित विधान सभा है।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**

   (क) राज्य विधान मंडल की रचना का वर्णन कीजिए।

   (ख) राज्य का राज्यपाल कैसे नियुक्त किया जाता है?

   (ग) ऐसे दो अवसरों के नाम बताइए जब राज्यपाल राज्य विधान सभा को संबोधित करता है।

   (घ) अध्यादेश से आप क्या समझते हैं?

   (ङ) राज्य मंत्रि-परिषद् को कैसे नियुक्त किया जाता है?

   (च) 'स्वविवेकी' शक्तियों से क्या अभिप्राय है?

   (छ) मुख्यमंत्री के दो कार्य लिखिए।

   (ज) केंद्र शासित क्षेत्र के प्रशासन का मुख्य अधिकारी कौन होता है?

   (झ) उच्च न्यायालय के न्यायाधीश के रूप में नियुक्ति के लिए किन्हीं दो आवश्यक योग्यताओं का उल्लेख कीजिए।

2. **रिक्त स्थानों की पूर्ति कीजिए**

   (क) मुख्यमंत्री की सिफ़ारिश पर ____________ विधान सभा भंग कर सकता है।

   (ख) वित्त विधेयक के रूप में किसी प्रस्ताव को केवल ____________ में प्रस्तुत किया जा सकता है।

   (ग) राज्य में विधेयक केवल ____________ के हस्ताक्षर होने के बाद ही कानून बनता है।

   (घ) मुख्यमंत्री के त्याग-पत्र से ____________ अपने आप भंग हो जाती है।

   (ङ) राज्यपाल ____________ को नियुक्त करने में स्वविवेकी शक्ति का प्रयोग कर सकता है।

3. **परियोजना कार्य**

   - भारत के सभी राज्यों के मुख्यमंत्रियों तथा राज्यपालों के नाम एकत्र कीजिए।

अध्याय 16

भारत में प्रशासन एवं विकास

गणतंत्र भारत में 28 राज्य और 7 संघीय क्षेत्र हैं। भारत के राजनीतिक मानचित्र में हम सभी राज्यों और संघीय क्षेत्रों को उनकी राजधानियों सहित पहचान कर चिह्नित् कर सकते हैं।

भारत का संविधान यह स्पष्ट कहता है कि भारत राज्यों का एक संघ है, संघ और राज्यों की अपनी सरकारें हैं। संघीय क्षेत्रों को सीधे केंद्र के नियंत्रण और निरीक्षण में रखा गया है। प्रत्येक का क्षेत्र और गतिविधियाँ सुस्पष्ट दी गई हैं।

तीनों सूचियाँ — संघीय सूची, राज्य सूची और समवर्ती सूची — केंद्र और राज्यों की सत्ता और प्रशासनिक क्षेत्राधिकार को क्रमशः परिभाषित करती हैं।

राज्य और ज़िला प्रशासन

हम संघीय सरकार के विभिन्न अंगों तथा राज्य सरकारों के बारे में पहले ही पढ़ चुके हैं। प्रत्येक राज्य को छोटी इकाइयों में बाँटा गया है जिन्हें 'ज़िला' कहते हैं। कुछ ज़िलों का क्षेत्र विस्तृत होता है तो कुछ अन्य ज़िलों में जनसंख्या अधिक होती है। भिन्न-भिन्न सामाजिक और आर्थिक पृष्ठभूमि वाले बड़े क्षेत्रों में केंद्रीकृत सत्ता द्वारा प्रशासन चलाना बहुत कठिन होता है। इसलिए प्रशासनिक सुविधा और कार्य-कुशलता के लिए भारत को विभिन्न राज्यों और फिर राज्यों को ज़िलों में बाँटा गया है।

राज्य सचिवालय

सरकार की कार्यपालिका के कार्यों को विभिन्न विभागों में बाँटा गया है। प्रत्येक विभाग को एक मंत्री के अधिकार क्षेत्र में रखा गया है। मंत्री, विभाग का राजनीतिक मुखिया होता है। प्रत्येक विभाग अथवा मंत्रालय में एक सचिव होता है जो विभाग के सभी नीति और प्रशासन संबंधी मामलों में मंत्री का मुख्य सलाहकार होता है।

सचिव भारतीय प्रशासनिक सेवा का एक वरिष्ठ अधिकारी होता है। वह सरकार द्वारा बनाई गई नीतियों तथा निर्णयों को लागू करने के लिए उत्तरदायी होता है। सहायता के लिए प्रत्येक सचिव के साथ कई अन्य अधिकारी होते हैं। इन सचिवों का कार्यालय 'सचिवालय' कहलाता है।

भारत
राजनीतिक

निर्देशिका

- अंतर्राष्ट्रीय सीमा
- राज्य सीमा
- राज्य राजधानी

किलोमीटर

भारत का राजनीतिक मानचित्र

भारतीय प्रशासनिक सेवा (आई.ए.एस.) का अधिकारी संघ लोक सेवा आयोग द्वारा संचालित अखिल भारतीय प्रतियोगी परीक्षा के माध्यम से चुना जाता है।

ज़िला प्रशासन

प्रशासन की एक इकाई के रूप में भारत में ज़िला एक अति महत्त्वपूर्ण इकाई है। हमारे देश में लगभग 500 ज़िले हैं। ज़िले में प्रशासन तीन महत्त्वपूर्ण कार्य करता है — (1) कानून एवं व्यवस्था की देखभाल, (2) भू-अभिलेखों का रख-रखाव तथा राजस्व को एकत्र करना और (3) विकास योजनाओं तथा उनके द्वारा लाभों को लोगों तक पहुँचाना। ज़िला एक बड़ी इकाई है। अतः प्रशासनिक सुविधा हेतु प्रत्येक ज़िला उपमंडलों में विभाजित होता है जो क्रमशः ज़िला कलेक्टर तथा उपमंडलीय अधिकारियों के निरीक्षण के अंतर्गत होते हैं। उपमंडल तहसीलों में बँटे होते हैं। प्रत्येक तहसील का प्रमुख एक तहसीलदार होता है जो वहाँ के भू-अभिलेखों तथा भू-राजस्व की देखभाल करता है। खंड विकास अधिकारी विकास योजनाओं और उपपुलिस अधीक्षक कानून तथा व्यवस्था की देखभाल करते हैं।

ज़िला कलेक्टर

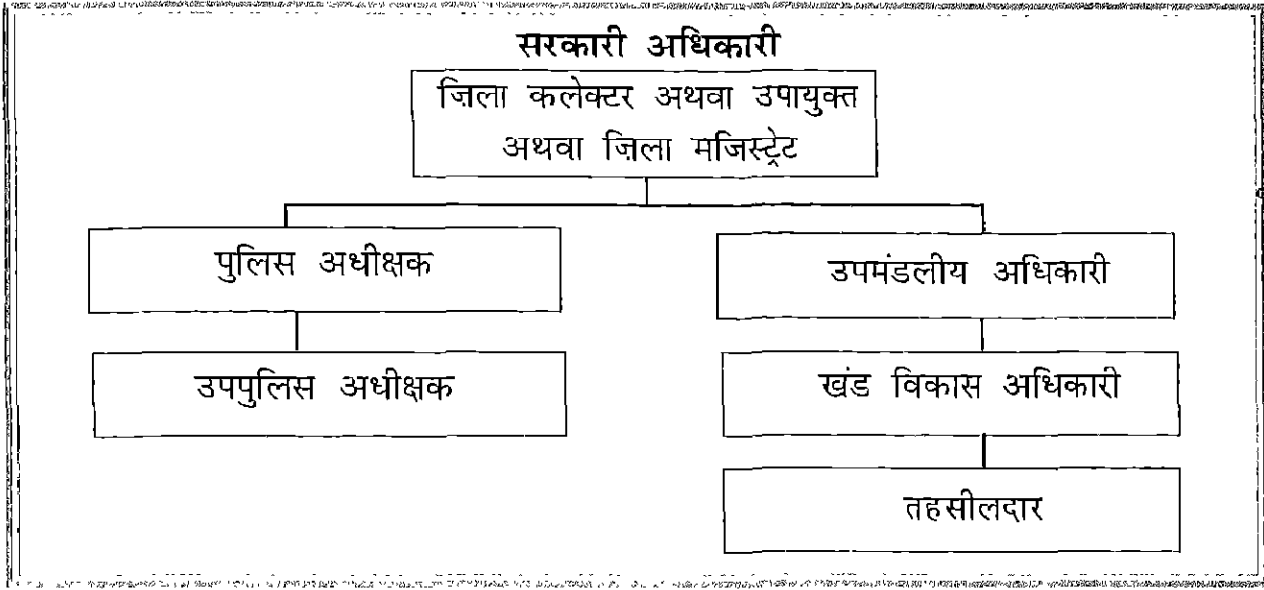
ज़िला प्रशासन के मुखिया के रूप में कलेक्टर की स्थिति अद्वितीय है। कुछ राज्यों में उसे ज़िला अधिकारी, ज़िलाधीश या ज़िला मजिस्ट्रेट अथवा उपायुक्त के नाम से जाना जाता है। वह भारतीय प्रशासनिक सेवा का एक महत्त्वपूर्ण अधिकारी होता है। एक कलेक्टर विभिन्न रूपों में कार्य करता है, उदाहरण के लिए — कलेक्टर, ज़िला मजिस्ट्रेट, ज़िला प्रशासनिक अधिकारी और ज़िला विकास अधिकारी। यह सारे पदनाम उसके दायित्वों के कारण बने हैं। कलेक्टर भू-राजस्व तथा सरकारी बकायों को उगाहने के लिए उत्तरदायी है। ज़िला मजिस्ट्रेट, ज़िले में कानून व्यवस्था बनाए रखने के लिए पुलिस अधीक्षक, जो ज़िला पुलिस विभाग का मुखिया होता है, की सहायता लेता है। ज़िला प्रशासनिक अधिकारी, राज्य सरकार का मुख्य एजेंट होने के नाते, विभिन्न विभागों में तालमेल बनाए रखने के लिए उत्तरदायी है और ज़िला विकास अधिकारी ज़िले की योजनाओं को बनवाने के लिए उत्तरदायी है।

इस बात का पता लगाइए कि आपके क्षेत्र के ज़िलाधीश और ज़िला कलेक्टर किस नाम से जाने जाते हैं।

उपमंडलीय अधिकारी

ज़िले के उपमंडल, उपमंडलीय अधिकारी अथवा डिप्टी कलेक्टर के अधीन होते हैं जो राज्य प्रशासनिक सेवा से होता है। उपमंडलीय अधिकारी अपने उपमंडल में लगभग वही कार्य करता है जो ज़िले का ज़िला कलेक्टर या उपायुक्त ज़िले में करता है। वह प्रशासन का अविभाज्य अंग होने के नाते ज़िला कलेक्टर की सहायता करता है।

तहसीलदार

उपमंडल तहसीलों में विभाजित होते हैं। प्रत्येक तहसील एक तहसीलदार के नियंत्रण में होती

है। तहसीलदार भू-विवादों के निपटान में मदद के अतिरिक्त भू-अभिलेखों तथा कृषि उत्पादन के रिकार्ड रखता है। सूखा अथवा बाढ़ के समय वह उत्पादन की क्षति का आकलन जैसे महत्त्वपूर्ण कार्य करता है।

कानूनगो और पटवारी

ये गाँवों का राजस्व रिकार्ड रखते हैं और राजस्व एकत्रित करने में सहायता करते हैं।

विकासात्मक प्रशासन

यह सभी अधिकारी राज्य और जिला स्तर पर लोगों के कल्याण हेतु कार्यरत हैं। खंड विकास अधिकारी सहित यह सभी अधिकारी सुधार एवं विकास के लिए पंचायत राज संस्थाओं के साथ मिल-जुल कर कार्य करते हैं।

भारत एक कल्याणकारी राज्य है जो अपने लोगों के कल्याण और विकास के प्रति वचनबद्ध है। इसका मुख्य उद्देश्य सदैव लोगों के जीवन स्तर को ऊपर उठाना, जनता को शिक्षित करना और सूचना देना, मानवीय गरिमा को बढ़ाना तथा लोगों के सहयोग और प्रतिभागिता के आधार पर योजनाबद्ध प्रयास करना है।

इन आवश्यकताओं को पूरा करने के लिए हमारी अर्थव्यवस्था को सुदृढ़ करने के लिए सरकार ने कदम उठाए हैं। भारत की प्रथम पंचवर्षीय योजना की अवधि 1951-56 थी। आर्थिक नियोजन के कुछ मुख्य उद्देश्य हैं — आर्थिक प्रगति, पूर्ण और स्थाई नौकरियाँ तथा प्राकृतिक संसाधनों का उचित उपयोग।

> ज्ञात करें कि योजना आयोग का अध्यक्ष कौन है और इस समय कौन सी पंचवर्षीय योजना चल रही है।

राज्यों ने राज्य, ज़िले और स्थानीय सभी स्तरों पर प्रशासनिक कार्य प्रणाली का विकास करने के लिए कदम उठाए हैं। राज्य मुख्यालय में सचिवों के एक वर्ग के माध्यम से सामंजस्य स्थापित किया जाता है। वे विभिन्न विकास विभागों के अधिकारी होते हैं।

ज़िला विकास गतिविधियों में कलेक्टर की भूमिका महत्त्वपूर्ण बन गई है। विकास कार्यों के प्रति उसके कर्तव्यों में अज्ञानता दूर करना,

अंध-विश्वास मिटाना, सामुदायिक क्रिया-कलापों को बढ़ाना, शरणार्थियों का पुनर्वास तथा अपने अधिकारों एवं कर्तव्यों के प्रति जागरूकता को बढ़ाना शामिल हैं। वस्तुत: ऐसे कर्तव्यों को निभाने में कलेक्टर को लोगों के संपर्क में आने से सही अर्थों में एक लोक सेवक की उपयोगिता को सिद्ध करने के पर्याप्त अवसर मिलते हैं।

हम पिछली कक्षा में पहले ही पढ़ चुके हैं कि ग्रामीण और शहरी, दोनों क्षेत्रों में स्वशासी संस्थाएँ हैं। शहरी संस्थाओं में नगर निगम, नगर परिषद् और नगर पंचायत आती हैं। ग्रामीण प्रशासन में त्रिस्तरीय व्यवस्था पाते हैं। सबसे उच्च स्तर पर अर्थात जिला स्तर पर जिला परिषद् अथवा जिला पंचायत होती है। उसके बाद ब्लॉक स्तर पर पंचायत समिति होती है जिसे ब्लॉक समिति भी कहा जाता है और गाँव के स्तर पर ग्राम पंचायत होती है। ग्रामीण क्षेत्रों में तीन स्तरों पर स्थानीय स्वशासन की इन इकाइयों से पंचायती राज बनता है। लोगों के सहयोग और प्रतिभागिता से ही विकास और प्रगति हो सकती है। पंचायती राज लोगों की भागीदारी और बिना दूसरों पर निर्भर हुए, अपनी समस्याएँ सुलझाने के अवसर प्रदान करता है।

आज भारत में अच्छे परिवर्तनों के संकेत दिखाई देते हैं। सरकार ने लोगों के कल्याण के लिए अनेक कदम उठाए हैं। इनमें आधारभूत सुविधाएँ जैसे पीने का पानी व बिजली उपलब्ध कराना, सड़कें बनवाना, अस्पताल, डिस्पेंसरियाँ, स्कूल और प्रौढ़ शिक्षा केंद्र खुलवाना आदि सम्मिलित हैं। ग्रामीण भारत में अधिकांश गाँवों में बिजली, पीने का पानी, सड़कें, स्वास्थ्य केंद्र तथा स्कूल उपलब्ध हैं। लोगों का जीवन स्तर निरंतर सुधर रहा है।

> ज्ञात करें कि आपके क्षेत्र में कितने स्कूल और स्वास्थ्य केंद्र हैं।

साक्षरता-दर प्रति वर्ष बढ़ रही है। 6 से 14 वर्ष की आयु वर्ग के स्कूल जाने वाले बच्चों का प्रतिशत बढ़ा है। इसके अतिरिक्त सरकार ने प्रौढ़ निरक्षरता को दूर करने के लिए विभिन्न प्रौढ़ शिक्षा कार्यक्रम प्रारंभ किए हैं, जैसे राष्ट्रीय प्रौढ़ शिक्षा कार्यक्रम (एन.ए.ई.पी.) तथा राष्ट्रीय साक्षरता अभियान (एन.एल.एम.)। 2001 की जनगणना के अनुसार हमारे देश की साक्षरता-दर 65.38 प्रतिशत तक पहुँच चुकी है।

> अपने राज्य की साक्षरता-दर ज्ञात करें।

भारत में ग्रामीण दरिद्रता को घटाने के लिए केंद्र द्वारा प्रदत्त आर्थिक सहायता से चल रही योजनाओं के माध्यम से प्रयास किए गए हैं। समाज कल्याण योजनाओं का उद्देश्य गरीब लोगों की दशा को सुधारना है। इन योजनाओं में प्राथमिक स्कूलों में पढ़ रहे गरीब परिवारों के बच्चों के लिए दोपहर का भोजन, ग्रामीण समूह जीवन बीमा योजना (जिसमें बीमा किश्त का आधा भाग सरकार देती है) तथा आवासीय इकाइयों का निर्माण सम्मिलित हैं।

> स्वर्ण जयंती ग्राम स्वरोज़गार योजना, इंदिरा आवास योजना और जवाहर ग्राम समृद्धि योजना जैसे कई विशेष कार्यक्रम हैं। इनमें से कई का उद्देश्य गरीब लोगों की आर्थिक स्थिति को सुधारना है। ज्ञात करें कि क्या आपके गाँव अथवा क्षेत्र से कोई व्यक्ति इन कार्यक्रमों में से किसी कार्यक्रम का लाभ उठा रहा है।

वर्तमान में हमारा देश एक भव्य परिवर्तन की ओर बढ़ रहा है। हम उपग्रह तकनीक के आधुनिक युग तक की यात्रा कर चुके हैं। संचार तकनीक में हुई प्रगति ने मानव जीवन की गुणवत्ता पर गहरा प्रभाव डाला है। कंप्यूटर और संचार के संगम ने अपार अवसर प्रदान करने के साथ-साथ परिवर्तन भी किए हैं। ग्रामीण भारत में भी कंप्यूटर प्रवेश कर चुका है, कंप्यूटर ने राज्य में भी सार्थक परिवर्तन किए हैं। सूचना तकनीक में आई क्रांति ने आर्थिक और सामाजिक परिवर्तन की संभावनाओं के द्वार खोल दिए हैं।

ज्ञात करें कि आपके क्षेत्र में कितने सूचना तकनीक केंद्र हैं।

अभ्यास

1. **निम्नलिखित प्रश्नों के उत्तर संक्षेप में दीजिए**
   - (क) भारत को विभिन्न राज्यों और ज़िलों में क्यों बाँटा गया है?
   - (ख) ज़िला कलेक्टर के कार्यों को संक्षेप में लिखिए।
   - (ग) आर्थिक नियोजन के उद्‌देश्य क्या हैं?
   - (घ) पंचायती राज के अंतर्गत स्थानीय स्वशासन संस्थाओं के तीन स्तर कौन से हैं?
   - (ङ) गरीबी हटाने के लिए सरकार द्वारा चलाए जा रहे विभिन्न कार्यक्रमों के नाम लिखिए।

2. **रिक्त स्थानों की पूर्ति कीजिए**
   - (क) एक राज्य में प्रशासन की मुख्य इकाई ज़िला है और इसके प्रमुख को __________ कहा जाता है।
   - (ख) ज़िले में पुलिस विभाग के प्रमुख को ____________ कहा जाता है।
   - (ग) शहरी संस्थाओं में _________ नगरपालिका और _________ सम्मिलित हैं।
   - (घ) ग्रामीण क्षेत्रों में तीन स्तरों पर स्थानीय स्वशासन से ________________ बनता है।
   - (ङ) विकास केवल लोगों के सहयोग तथा ____________ से आ सकता है।

3. **परियोजना कार्य**
   - अपने ज़िले के प्रशासनिक अधिकारियों का चार्ट बनाकर उनके क्षेत्राधिकार में आने वाले क्षेत्रों के नाम बताता हुआ एक चार्ट बनाइए।

पारिभाषिक शब्दावली

अजैविक (Abiotic) — बिना जीवन वाले संघटक।

अस्पृश्यता (Untouchability) — भारत में जातिभेद के कारण लोगों के एक वर्ग को अन्य वर्गों से निम्न समझा जाता था। भारतीय संविधान ने कानून द्वारा अस्पृश्यता को समाप्त कर दिया है। कोई भी इस प्रकार का व्यवहार करता पाए जाने पर दंड का भागी होता है।

अनुसूचित जातियाँ तथा जनजातियाँ (Scheduled Castes and Tribes) — अनुसूचित जातियाँ और जनजातियाँ वे जातियाँ हैं जो आर्थिक और सामाजिक दृष्टि से पिछड़ी हुई हैं। इन जातियों के विकास एवं उत्थान के लिए विशेष प्रावधान किए गए हैं। इनके उत्थान हेतु एक निश्चित अवधि के लिए आरक्षण एवं योग्यताओं में छूट की व्यवस्था की गई है।

अवशिष्ट शक्तियाँ (Residuary Powers) — हमारे संविधान में तीन सूचियाँ हैं — संघ सूची, राज्य सूची और समवर्ती सूची। जो विषय इन तीनों सूचियों में नहीं आते उनको अवशिष्ट शक्तियाँ कहा जाता है। भारत में ये शक्तियाँ केंद्र के पास हैं।

अध्यादेश (Ordinance) — सामान्यत: जब विधायिका अथवा लोक सभा का सत्र न चल रहा हो, तब राष्ट्रपति अथवा राज्यपाल द्वारा जारी आदेश। यह आदेश कानून की शक्ति एवं प्रभाव रखता है।

अपरदन (Erosion) — एक धीमी प्रक्रिया जिससे ऊँचे स्थान कटते रहते हैं और अपरदित पदार्थ अपनी उत्पत्ति के स्थान से दूसरे स्थान पर ले जाए जाते हैं।

अविश्वास प्रस्ताव (No-Confidence Motion) — सत्तारूढ़ दल की नीतियों और कार्यों के विरुद्ध विधायिका में प्रस्तुत प्रस्ताव। यदि ऐसा प्रस्ताव बहुमत के आधार पर पारित हो जाता है तो इसका अभिप्राय होता है कि विधायिका का मंत्रि-परिषद् पर विश्वास नहीं रहा जिसके परिणामस्वरूप मंत्रि परिषद् को त्याग-पत्र देना पड़ता है।

आपातकाल (Emergency) — यह एक असामान्य स्थिति है जो तुरंत कार्यवाही चाहती है। केंद्र सरकार द्वारा देश में आपातकाल की घोषणा की जा सकती है, यदि देश की राष्ट्रीय सीमाओं पर आक्रमण कर दिया गया हो अथवा सशस्त्र विद्रोह हो अथवा वित्तीय संकट हो। एक नागरिक के मौलिक अधिकारों को प्रायः आपातकाल में स्थगित/निलंबित कर दिया जाता है। राज्यों में संवैधानिक तंत्र की विफलता पर आपातकाल की घोषणा की जा सकती है।

आवास (Habitat) — किसी जीव का आवश्यक पर्यावरण।

उद्देशिका (Preamble) — यह संविधान के लक्ष्यों और उद्देश्यों को स्पष्ट करती है। उदाहरण के लिए भारत के संविधान की भी उद्देशिका है जो अन्य सिद्धांतों के साथ-साथ न्याय, समता, स्वतंत्रता और भाई-चारे के सिद्धांतों की उद्घोषणा करती है।

एस्ट्रोलेब (Astrolabe) — किसी जगह का अक्षांश मापने के लिए एस्ट्रोलेब व क्वाड्रेंट का प्रयोग होता था।

ओसांक (Dew Point) — वायुमंडल का वह तापमान जिस पर वायु की जलवाष्प संतृप्त हो जाती है।

ओस (Dew) — जल की छोटी बूँदें जो जलवाष्प की ठंडी सतह या स्थल की अन्य वस्तुओं पर द्रवीकरण के फलस्वरूप बनती हैं जबकि वायु का तापमान ओसांक से भी अधिक हो।

ऋतु या मौसम (Weather) — वायुमंडलीय दबाव, तापमान, आर्द्रता, वर्षण, बदली तथा हवाओं के एक दिए हुए स्थान तथा समय की दशाएँ। इन्हें ऋतु के तत्त्व भी कहते हैं।

ऋतु-क्षय (Weathering) — खुले हुए शैलों का तापमान के अंतर, पाला पड़ने अथवा पशुओं, पादपों या मनुष्य की क्रिया से टूटना तथा विघटित होना।

कुहरा (Fog) — जल की बूँदों का ढेर जो धरातल के निकट संघटित हो जाता है और जिससे दृश्यता एक किलोमीटर या उससे भी कम हो जाती है।

क्रमण (Gradation)	वे सारी प्रक्रियाएँ जो स्थलमंडल के धरातल को काटकर एक सामान्य तल पर लाने की चेष्टा करती हैं।
दिक्सूचक यंत्र (Compass)	चुंबकीय उत्तर दिशा बताने वाला उपकरण।
खाद्य शृंखला (Food Chain)	पारिस्थितिकी तंत्र में एक जीव से दूसरे जीव को ऊर्जा का स्थानांतरण।
गार्ज या महाखड्ड (Gorge)	एक नदी द्वारा नीचे तेज़ कटाव के परिणामस्वरूप तीव्र ढाल वाली गहरी संकरी घाटी आकार के महाखड्डों को केनियन (Canyons) कहते हैं।
गणतंत्र (Republic)	वह देश जिसका प्रधान/मुखिया एक चुना हुआ व्यक्ति होता है। उदाहरण के लिए भारत का राष्ट्रपति निर्वाचित है। इंग्लैंड गणतंत्र नहीं है क्योंकि इसके राज्य की प्रमुख महारानी है जो वंशानुगत है।
घास के मैदान (Grasslands)	संसार के वे क्षेत्र जहाँ की प्रमुख वनस्पति घास तथा यत्र-तत्र कुछ वृक्ष पाए जाते हैं। उष्णकटिबंधीय घास के मैदान सवाना तथा शीतोष्ण कटिबंधीय धारा के मैदान प्रेयरी तथा स्टेप्स कहलाते हैं।
चक्रवात (Cyclone)	निम्न अक्षांशों में बनने वाला निम्न वायुदाब प्रक्रम जिसमें निचले वायुमंडल में हवाएँ केंद्र की ओर अपसारित होती है। मध्य-अक्षांशीय चक्रवातों को अबदाब (Depressions) कहते हैं।
चक्रवातीय वर्षा (Cyclonic rainfall)	वर्षा जो चक्रवातीय दशाओं में वायु के ऊपर उठने से संबंधित हैं।
जीवांश (Fossils)	शिलाओं में दबे पादपों तथा पशुओं के अवशेष या प्रति चिह्न।
जलोढ़ मैदान (Alluvial Plains)	नदियों द्वारा जमा किए गए जलोढ़क से बने मैदान।
जलमंडल (Hydrosphere)	पृथ्वी के धरातल पर मिलने वाले जल का मंडल जो स्थलमंडल (शैलों या पत्थरों का मंडल) तथा वायुमंडल (हवा के मंडल) से भिन्न होता है।

जीवोम (Biomes) — एक-सी जलवायु दशाओं वाले क्षेत्रों में विभिन्न वर्गों या समूहों में पाए जाने वाले पादप-समूह।

जैविक (Biotic) — जीवित संघटक।

ज्वालामुखी विवर (Crater) — ज्वालामुखी शंकु के शीर्ष पर बना कीप की आकृति का गर्त जिससे विस्फोट होता है और लावा निकलता है।

जैवमंडल (Biosphere) — पृथ्वी को घेरने वाली बहुत पतली परत जहाँ सारा जीवन — पादप और मनुष्य सहित सभी जीव पाए जाते हैं।

डेल्टा (Delta) — जलोढ़ का एक समतल क्षेत्र, जो प्राय: त्रिभुजाकार होता है, जो अपेक्षाकृत शांत जलक्षेत्र जैसे - समुद्र अथवा झील से मिलने वाली नदी के मुहाने पर बनता है।

डाउंस (Downs) — आस्ट्रेलिया के मध्य-अक्षांशीय घास के मैदान।

तटीय मैदान (Coastal Plain) — तट के सहारे विस्तृत एक निचली भूमि की पेटी।

द्विध्रुवीय (Bipolarity) — वह अंतर्राष्ट्रीय व्यवस्था जिसमें शक्ति दो खंडों के आस-पास घूमती है। उदाहरण के लिए 20वीं शताब्दी में सोवियत संघ के विघटन से पहले संसार दो शक्ति-खंडों में बँटा हुआ था, जिनमें से एक संयुक्त राज्य अमेरिका और दूसरा तत्कालीन सोवियत संघ था।

द्विसदनीय (Bicameral) — विधायिका का दो सदनों में विभाजन। भारत में संसद के दो सदन हैं - लोक सभा और राज्य सभा।

न्यायपालिका (Judiciary) — सरकार का एक अंग जो विभिन्न प्रकार के विवादों पर कानून के अर्थ के आधार पर निर्णय लेता है।

न्याय (Justice) — कानूनी दृष्टि से उपयुक्त इनाम अथवा सजा देना, प्रत्येक व्यक्ति को उसका देय भाग देना।

निरपेक्ष आर्द्रता (Absolute humidity) — एक इकाई वायु के आयतन में प्राप्त जल की वास्तविक मात्रा।

पंथ-निरपेक्ष राज्य (Secular State) — एक ऐसा राज्य जो किसी धर्म विशेष का पक्ष नहीं लेता और सभी धर्मों को समान समझता है। भारत एक पंथ-निरपेक्ष राज्य है।

पंचायती राज (Panchayati Raj)	यह त्रिस्तरीय व्यवस्था है जिसमें ग्राम स्तर पर ग्राम पंचायत, ब्लाक स्तर पर पंचायत समिति और ज़िला स्तर पर ज़िला परिषद् होती है।
पर्णपाती वन (Deciduous forest)	ऐसे वन जहाँ वर्ष के एक भाग में वृक्ष अपने पत्ते गिरा देते हैं।
पारिस्थितिक तंत्र (पारितंत्र) (Ecosystem)	भौतिक पर्यावरण और उसमें रहने वाले जीवों के सम्मिलित रूप को पारितंत्र कहते हैं।
पारिस्थितिकी (Ecology)	वह विज्ञान जो किसी क्षेत्र में रहने वाले विभिन्न जीवों के सह-संबंधों का अध्ययन करता है।
पर्यावरण (Environment)	वह परिवेश अथवा परिस्थितियाँ जिनमें एक व्यक्ति अथवा वस्तु रहती है और अपना विशेष आवरण-स्वभाव विकसित करती है। इसके अंतर्गत भौतिक तथा सांस्कृतिक दोनों तत्त्व आते हैं।
बादल (Cloud)	जलवाष्प के संघनन के परिणामस्वरूप ऊपरी वायुमंडल में तैरते हुए असंख्य जलकण या हिमकण।
भाई-चारा (Fraternity)	एक देश के नागरिकों में मेल-मिलाप की भावना।
महासागरीय धाराएँ (Ocean currents)	समुद्र की सतह या अधोसतह पर बहने वाले जल की धाराएँ।
भौम जल (Ground water)	पृथ्वी के धरातल के नीचे शैलों के निचले भाग जो जल से संतृप्त होते हैं।
लोकतंत्र (Democracy)	यह सरकार का एक रूप और जीने का एक तरीका है। एक लोकतांत्रिक सरकार लोगों द्वारा चुनी जाती है और उनके द्वारा बदली भी जा सकती है।
शीत युद्ध (Cold war)	द्वितीय विश्व युद्ध के बाद अमेरिका की प्रधानता वाले पश्चिम के देशों और सोवियत संघ की प्रधानता वाले पूर्व के देशों के बीच शत्रुता का काल जो 1991 में सोवियत संघ के विघटन से समाप्त हो गया।
सूर्यातप (Insolation)	सूर्य से चलकर पृथ्वी के धरातल पर पहुँचने वाली ऊर्जा की मात्रा।

स्थलमंडल (Lithosphere)	पृथ्वी की अपेक्षाकृत पतली ठोस परत या बाह्य परत।
समता (Equality)	समता का अर्थ है सभी नागरिकों के साथ जाति, वंश, रंग, धर्म और लिंग के आधार पर भेदभाव किए बिना, एक-सा व्यवहार करना।
संशोधन (Amendment)	संसद द्वारा कानून अथवा संविधान में किया गया परिवर्तन।
स्वतंत्रता (Freedom or Liberty)	अपनी सोच अथवा इच्छा के अनुसार कार्य करने की क्षमता।
संघनन (Condensation)	वह प्रक्रिया जिससे वायुमंडल का जलवाष्प जल की छोटी बूँदों या हिमकणों में बदल जाता है।
संवहनीय वर्षा (Convectional rainfall)	पृथ्वी के धरातल पर तेज गर्मी पड़ने से ऊपर उठने वाली हवाओं से होने वाली वर्षा।
सदाबहार वन (Evergreen forests)	विभिन्न प्रकार के वृक्षों वाले वन जिनमें पत्तियों का आवरण वर्ष भर हरा बना रहता है।
सीमा (Sima)	यह परत मुख्यतया सिलिकेट, मैगनीशिया तथा अन्य भारी सघन धातुओं से निर्मित होती है। (सीमा की परत सियाल की परत से सघन होती है तथा उसके नीचे रहती है। महासागरों के तल प्राय: इससे बने होते हैं।)
सियाल (Sial)	पृथ्वी की भू-पर्पटी की पतली ऊपरी परत जो मुख्यत: सिलिकेट तथा अलूमिना द्वारा निर्मित होती है।
संविधान (Constitution)	मौलिक कानून और सिद्धांत जिनके अनुसार देश का शासन चलता है।
स्वविवेक शक्तियाँ (Discretionary powers)	राज्यपाल द्वारा अपनी समझ से उपयोग की गई शक्तियों को स्वविवेक शक्तियाँ कहते हैं। इनके उपयोग के लिए उसे मंत्रि-परिषद् की सलाह की आवश्यकता नहीं होती।
समाजवादी राज्य (Socialist State)	ऐसा राज्य जिसमें उत्पादन के साधन जैसे भूमि, खनिज संसाधन, कल-कारखाने और वितरण के साधन सरकार के हाथ में होते हैं।
ह्यूमस (Humus)	मृदा में मिले विघटित जैव पदार्थ।
वैश्वीकरण (Globalisation)	यह एक ऐसी व्यवस्था का उदय है जिसमें हमारा जीवन हमसे दूर अन्य देशों में होने वाली घटनाओं और निर्णयों पर

निर्भर करता है। यह राजनैतिक प्रक्रियाओं के विस्तार पर प्रकाश डालता है। परिणामस्वरूप स्थानीय, राष्ट्रीय और विश्व की घटनाओं का लगातार अंतर्संबंध स्थापित होना।

वनारोपण (Afforestation) — किसी क्षेत्र में वन आवरण प्रदान करने के लिए वृक्षारोपण।

वायुमंडल (Atmosphere) — पृथ्वी को घेरने वाली वायु की परत।

वयस्क मताधिकार (Adult Franchise) — किसी देश के प्रत्येक वयस्क नागरिक को वोट डालने का अधिकार। भारत में यह अधिकार 18 वर्ष या उससे अधिक की आयु वाले प्रत्येक नागरिक को दिया गया है।

विधेयक (Bill) — एक प्रस्ताव जिस पर विधायी संस्थाओं द्वारा बहस की जाती है। पारित होने पर विधेयक कानून बन जाता है।

विचारधारा (Ideology) — सुस्पष्ट विचार जो किसी प्रकार की संगठित राजनीतिक कार्यवाही का आधार बनते हैं।

क्षमादान (Pardon) — किसी व्यक्ति को किसी अपराध के लिए दी गई सज़ा को कम करना या माफ़ करना। भारत का राष्ट्रपति अथवा किसी राज्य का राज्यपाल कानून की अदालत द्वारा दंडित किसी अपराधी को क्षमादान दे सकता है।

when facts are related to one another, when they are interpreted with reference to other facts, that truth results Half truths are often more dangerous than no truths, either when these half truths are based upon partial error or when they are based upon incomplete and inadequate facts.

A student leaves school, and the reason given by the parent is that his help is needed at home. This undoubtedly is a fact, but, if we are interested in finding the real cause of his leaving—the truth—we will not rest content with this fact. We will search for other relevant facts and try to find the answers to such questions as: How badly is he needed? Why is he needed? Is he needed any more than he has been? Has he had any trouble in school? Is he overage? It is only after much investigation, getting all the facts together, that we can find the real cause Leaving school is usually the result of many factors or causes working together over a considerable period, but the crisis may be brought on by any one of a number of things. The student may have had trouble with a teacher, he may have been offered a job, his father may have purchased an automobile on the installment plan and need help to make the payments; any of these or all of them together may operate to cause the withdrawal. It is only when we get at all the facts and see them in their proper relationship that we find truth.

Research is the same in essence no matter what the truth may be that is the object of the investigation Its method varies somewhat with the nature of the truth, but the purpose and the process of all types of research are essentially alike.

2. *Steps in Research*—There are certain well-recognized steps in all research; these steps vary in order and general character but they are all usually present. These steps are: (1) the formulation and definition or limitation of the problem to be solved, the topic to be investigated, (2) the collection and organization of data relevant to the problem and necessary for its solution; (3) the critical analysis and evaluation of the data; (4) the development and formulation of possible solutions or hypotheses, or "guesses", (5) the testing of the hypotheses to see whether any one or all of them form an adequate solution. If a satisfactory solution is not found, other data must be obtained and the process repeated until a satisfactory solution is found.

3 *Nature of Research* —Scientific research differs from other kinds of investigation in the care taken at each step in the process It is probably best described as an attitude of mind. The research worker has an intense desire to find truth wherever the truth is and whatever it may be. Many guidance workers apparently are more interested in bolstering up some belief, in proving the correctness of some pet theory, than in finding the truth No real research worker ever starts out to *prove anything;* he attempts merely to find whether a thing *is true or not* He does not try to *demonstrate* the correctness of a method or procedure, he attempts merely to find whether it is adequate for the work to be done The difference between the two attitudes may be illustrated in the following comparison of statements of a problem relating to an investigation into the cause of leaving school. The problem is sometimes stated in this way: To prove that economic necessity is the most frequent cause of leaving school. This indicates, at the outset of the study, that the investigator believes that economic necessity is the most frequent cause, it is altogether likely that he is prejudiced and biased in his point of view This is antagonistic to the scientific attitude. The problem should be stated as follows: To find how frequently economic necessity is given as a cause for leaving school, or, if the study is to be one dealing with real causes and not causes given by students To find what proportion of the withdrawals from school are due to economic necessity.

The research worker takes special care to get facts and is never satisfied until he has the best facts available and all the facts that can be obtained.

His conclusions *follow* his facts and are *based* upon the facts he has and upon nothing else. Absolute honesty of purpose and integrity of mind are fundamental characteristics of the research worker. He refuses to draw conclusions until all available facts are in; he accepts the conclusions found, whether they are personally agreeable to him or not; and, finally, he considers all conclusions as tentative, valid only until further facts are obtained, and he is perfectly willing to change his views, to reject the conclusions already formed, when new facts show the old conclusions to be false or inadequate

4 *Collection and Validation of Data* —Every part of the process of research is important and should receive careful

attention, but, for the guidance worker, one of the problems of greatest importance and difficulty is that of securing data and making sure that the data obtained are real facts and represent all the important facts dealing with the problem.

The problems engaging the attention of guidance workers are very complex, and it is extremely difficult to get at the facts necessary for their solution. Some of these difficulties will be described in detail in subsequent chapters. One or two illustrations only will be given here.

Suppose one wishes to investigate the occupations which the students of a certain high school have entered for a series of years. He is at once confronted with the task of securing reliable data. Usually the school records do not give any help. Sometimes a teacher or a principal has been with the school for a long time and knows personally practically all the students for, let us say, ten years. Can we rely upon the data given us by such a person for our facts? The research worker will secure all the information he can from the principal—but will not accept the data as valid without checking them up. The problem then is to devise an adequate check-up. One method is to secure the addresses of the students and send to each a letter asking for certain facts. This takes a long time and brings only meager results at best. Further, the reliability of the data secured in such a way is open to question. People sometimes resent such attempts to inquire into their private affairs; the reports are sometimes strongly tinged with romance and do not agree with the data given by the principal. They are, however, a useful check upon the reliability of the original data. The only way to secure data is to make personal visits to each student, and find from all available sources what he is doing, how long he has been in the occupation, what his income is, and all other data that may be significant. This takes so much time and involves so much labor and money as to make it almost impossible for the ordinary worker. But unless we do take the time to make sure that the facts are accurate, any conclusions we may draw will be fallacious.

The same difficulty confronts one in the investigation of causes of maladjustment of students in school. We cannot rely upon the data we get from the students themselves; they often do not know, and when they do know are often unwilling to tell. They usually give as the cause something that does not put the

blame on themselves or upon their friends, they often tell us what they think we want them to say or what would sound well Teachers also are often unreliable either from ignorance, bias, or plain perversity. The causes of failure or maladjustment may be obscure and have their origin in early childhood or have to do with intimate home conditions that are very difficult to get at All of these things make it very difficult to make sure that we have facts and that we have significant facts Only one well trained in the technique of getting facts and the validation of facts can successfully cope with the difficulties involved.

These techniques have been worked out very carefully for various types of research problems. They are so numerous and so technical that they cannot be given here in detail. It may be sufficient to mention one or two of the most important principles

a. All data should be objective as far as possible: that is, the facts obtained should be such that they are not affected by the person giving them or collecting them They should be of such a nature that anyone else investigating the same problem would get the same facts.

Facts should be carefully distinguished from opinions about facts. We may wish to find whether drunkenness is more or less common now than it was before the passage of the prohibitory amendment. We may do as a prominent magazine did, and send out a questionnaire to many prominent men and women in various cities and rural districts of the country asking their opinions regarding this question. We then would tabulate the returns. Could we accept the results of this questionnaire and conclude that drunkenness was more or less common as the returns showed? Have we collected facts? Obviously, all that we have done is to collect opinions about facts and these opinions are only as reliable as were the individuals making them. If the object was to collect opinions of prominent men, the investigation may have been scientific; in this case opinions are facts. But the only conclusion we can draw is that the opinions of such and such people in such and such places were thus and so This method gives us no help in determining whether drunkenness is actually more or less common now than before. Opinions about facts should never take the place of facts.

b. Investigations involving statistical procedures should never be undertaken until one has reasonable familiarity with

the procedures involved There are so many dangers and difficulties incident to statistical procedure that great care should be taken at every step. Many otherwise valuable studies have been rendered worthless because faulty and inaccurate statistical procedures were used. One should, however, not be deterred from undertaking studies involving statistics because of lack of training. Such training as may be necessary for making all but the most technical investigations can be fairly easily and quickly acquired. The advice of experts is usually available and freely given in matters involving more complicated techniques

5 *Evaluation of Research Studies.*—For the ordinary guidance worker, the most important question is that of determining the validity of research studies that have been made in various phases of guidance How can we distinguish the reliable studies from those that are not reliable? It is impossible to give any criteria that will enable one to distinguish with entire accuracy the true from the false. There are, however, a few principles that will be of some assistance

a. The Reliability of the Investigator.—If the investigator is known as a reliable research worker his conclusions are likely to be trustworthy. We should here distinguish between the prominence of a man and his reputation in research Some men secure prominence because they are frequently called upon for public addresses· others because they are propagandists. Such men have their place but they usually are not reliable research workers. Research men are often silent men; they talk little; they are not usually elected to prominent offices in popular organizations; their time is too valuable to be spent in such work. The conclusions of a man who is accustomed to do reliable research work are usually honest, and the presumption is that they are valid

b The Accuracy of the Report—Research workers usually report a study in such a way that others can judge for themselves whether the conclusions are valid or not. The original data are given or at least the tables derived from the original data, the methods used are described in detail, the limitations of the study are given, and possible inaccuracies are pointed out The real scientist has nothing to conceal, accordingly, he reports everything germane to the topic.

The safest attitude to take toward a research study is to be suspicious of all studies reported in such a way that we cannot

definitely determine what the method used was, what the original data were, or whether the conclusions grew out of the data used. We should be slow in accepting the conclusions of an author whenever he begins his conclusions in some such way as this: "The data here presented seem to indicate that Method A is superior to Method B, but other material not presented here shows very clearly that this apparent superiority is due to certain conditions . . ." If there were other material affecting the conclusions it should be presented, if it is of such a nature that it cannot be presented, it should not be mentioned In any case his study is not to be relied upon.

c *The Agreement of the Conclusions with Previously Demonstrated Truth or with Common Sense* —Research workers are often led to form conclusions that seem to them to be valid, but that are based upon incomplete data. If the conclusion is at variance with the results of previous research studies or even with commonly accepted belief, we are warranted in at least delaying our acceptance until further studies have been made. If it is true, no great harm can come from delaying for a time its acceptance; if it is not true, great harm may come from early acceptance. This does not warrant one in ridiculing the results of a study, however, because it does not seem to him to be "sensible." Most new truths, at least those that were very radical, have been pilloried, ridiculed, and their advocates sometimes martyred because they did not agree with "common sense" We must keep our minds open always and be ready to accept new truth, but we should not accept something *just because it is new.* "Prove all things, hold fast that which is good" is a safe principle to follow in the case of research studies. This is all the more necessary because there are at present so many faulty and unreliable studies reported in educational magazines The editors of these magazines would perform a real service to education if they would exercise greater care in acceptance of articles purporting to give the results of research and insist upon adequate description of the methods used

IV. The Selection of Research Problems

1. *Qualifications for Research.*—Not everyone is qualified to undertake research work in guidance; some are not interested in the particular type of study involved. Many excellent

teachers do not make good research workers and should not attempt it; it is foolish to spoil a good teacher by changing him into a poor research worker The characteristics suggested by the discussion of research methods are not those possessed by most people. They involve unusual analytical ability, a judicial attitude and an open mind, unlimited patience, and entire willingness to accept whatever conclusion may be indicated by the investigations. In addition one should have the technical training necessary to do the things required

2. *Criteria for the Selection of a Problem* — Granted the characteristics and the training necessary, what should be the basis for the selection of a topic for investigation? Before anyone undertakes a study involving research he should ask the following questions. These are taken largely from Crawford, Good, Monroe and Engelhart and *U S Bureau of Education Bulletin* No 24, 1926 (see bibliography at end of chapter).

1. Is the problem new, has it already been solved? If it is not new, does it need to be reworked?

One should always investigate studies that have already been made on the problem to find whether or not some one else has already solved the problem. If it has been solved satisfactorily there is no need for further work on it. It is possible, however even though a solution has been found, that we need to have another study made along the same lines to determine whether the first solution was correct.

2. Does the problem appeal to your interest? Other things being equal one will do his best work on a problem that is interesting to him.
3. Of what practical value will it be to you and to others?
    a. Is it worth doing? Some problems are interesting but not worth the effort necessary for their solution.
    b. Is it timely? Will it be specially valuable just now?
    c Is it strategic? That is, does the problem occupy a position of peculiar importance for the solution of other problems?
4. What are your qualifications for it?
    a What specialized ability and training does it require?
    b. Can you secure the necessary training?

Some otherwise excellent research studies are of little value because those who made them did not have the necessary ability. No one who is not well trained in French should undertake an

investigation in French. Only those who are statistically trained should attempt a research study involving statistics.

5 Is it feasible?
   a. Can it be worked? Some problems are very important but are impossible of solution with present knowledge and present testing machinery
   b Can sufficient data be found on the problem? It is often impossible to determine this in advance but in some cases it can be so determined. The question should always be raised in connection with any study under consideration
   c. What will it cost to investigate and to print? Some studies require only a small amount of money while others cannot successfully be carried through without the backing of some large corporation and the expenditure of several hundred thousand dollars Research studies involving statistical material and tables and graphs are very expensive to print This should be considered by anyone before undertaking a study
   d How long will it take? Some studies can be completed in a few months, others will take years of effort Before one begins a study he should count the cost in time as well as in money

The guidance worker never lacks problems worthy of investigation, they rise up to meet him at every turn, they must be solved before proper guidance can be given. In the following chapters some of the most important of these problems will be considered, studies already undertaken will be described, and suggestions made for additional research necessary to their complete solution.

QUESTIONS

1 How does research differ from thinking?
2. What are the principal points of difficulty in research?
3 Is the research worker ever justified in suppressing certain facts?
4. If we need to know all the facts before coming to a conclusion, how can we ever decide anything?
5 Is truth absolute or relative?

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Chapter VI

THE USE OF SCHOOL RECORDS IN STUDYING THE INDIVIDUAL

I. Studying the Individual

1. *The Need for Study of the Individual.*—The most important study to be undertaken is the study of the individual. We need to know the facts about each student; these are of vital importance. While we are continually in touch with students, it is, nevertheless, very difficult to secure reliable data about them Obviously, we can give little help unless we know what the student needs and what effect the help may have upon him.

2. *Studying the Individual as a Part of the Guidance Process* — In Chap. V, it was stated that when the individual himself is the subject of investigation, the process of investigation becomes a part of the method of guiding the individual. This is very important for several reasons. First. We cannot secure facts about students without their cooperation. This cooperation can be secured only when the student feels the value of the facts to be obtained. In order to create in him a sense of the value of such accurate information about himself, we must try to secure it at the time when he needs it. By getting the facts when he needs them, he is able to use them in the solution of his problem; that is, he is guided Second: Teachers, and especially investigators, are likely to think of themselves as individuals who are merely impersonal investigating agencies who must analyze the student, secure certain facts about him, and then pass these facts on to him in suitable doses at appropriate times. In some ways this is exactly what takes place, but it is by no means the whole truth. The pupil himself is an active agent in the entire guidance process We must continually be on our guard against thinking of the process of guidance as *steering* rather than *guiding*. A very essential part of the guidance of the pupil is the very process of securing facts about him.

3. *Facts Important to Secure.*—What facts about students are important for us to secure? Of course, any fact that can have any bearing upon choices now or later is important. Potentially, every fact is valuable, but we cannot hope to obtain them all. Completely adequate guidance can be given only when we have the most important facts about the individual. These include information not only concerning the various phases of his work at school but his family history, home conditions and general outside associations, his health, and his whole outlook upon life. To secure all of this information and to make sure that it is reliable, we need a body of experts of all kinds that it is not now possible to obtain, both because such experts are rare and because we do not have the money available to secure them. Some few schools are fortunate enough to be able to command the services of a number of such experts, and we may confidently look forward to a time when most schools will be thus provided. It will be a slow process, but when the value of expert help is made clear, we will find a way to secure it. At present, the majority of schools have only the regular teaching staff upon which to draw for assistance We are thus placed in a peculiar position We freely grant that we need all the facts that can be secured from a body of experts, but we realize that we cannot hope to have such assistance. In such a dilemma what can we do? Is there nothing worth while that can be accomplished without expert help? In answering such a natural and vital question let us consider the following: (1) any facts are better than no facts; (2) facts are better than opinions about facts, (3) facts are valuable only in proportion to the ability to use them.

While it is true that half-truths are often misleading, we are constantly under the necessity of acting on the information we have. The trouble with most of us is that we act not upon whatever *facts* we have, but upon prejudice, upon hearsay, upon superstition The world would be far in advance of what it is today if we all acted only upon what *facts* we have. Let us, then, get whatever facts we can about students, but let us be sure that they are *facts* and not *opinions about facts* Let us find the real cause of his leaving school, and not merely the reason he gives or the opinion of his teacher or even his mother. There are many useful facts that can easily be secured by the ordinary staff of the school,

many of which are already a matter of record. The only labor is that of copying and assembling the facts recorded. Such have to do with school records for the entire school life of the pupil These would include attendance records, causes of absence, failures and scholastic grades of various kinds, including scores in intelligence tests and achievement tests, participation in various activities; honors, awards, officos held; subjects studied. There can usually be secured data regarding health and often records of growth in height and weight. Some data are always available about certain phases of home life and economic and social status, as well as racial characteristics Occasional facts about other phases of the life of the pupil may be obtained, but great care must continually be exercised that facts be not mixed up with hearsay and opinion. Hearsay and opinion are often helpful, but only when they are recognized as such; they should never be substituted for facts.

It is often much easier to secure facts than it is to use them after they are obtained. On this account, there is a tendency to give much more attention to gathering data than to using the information collected We must keep continually in mind that the only reason we collect data is that we may *use* them.

If guidance is to be most intelligent and effective, we must, of course, perfect the methods of collecting and recording data. Material that cannot be used now will often be invaluable in a few years when enough has been collected to be really significant. While in no way condemning the practice of collecting data that cannot be immediately used, we must nevertheless seriously consider whether we could not more efficiently distribute our time and energy by spending less time in collecting a wide range of facts and more time in using of the facts secured and in the immediate applications of them to the pupils now needing help. The best course for us to follow is (1) study carefully the local situation and resources, both of the community and of the school; (2) find, by a general study or survey, what facts can be secured; (3) determine what facts are the most needed and what can be used; and (4) organize our program of fact finding and fact assembling with reference to the local needs and facilities. It is usually a good plan to have continually before us a fairly complete list of all important data so that we may not overlook some usable and important facts. A list such as that

given on pages 199–201 in connection with the case-study method will be found helpful and also the data recorded on the American Council Blank on pages 230–231

4. *Methods of Securing Facts.*—The way in which these facts may be secured will vary with the conditions of the school, but certain suggestions regarding sources of facts may be helpful. In general, we should try to make use of the regular agencies of the school in so far as they are adequate for our purpose We shall often be compelled to establish new agencies for fact finding and to reorganize those that now exist, but it will be found easily possible to utilize most of the agencies already organized in the school.

II School Records as Sources of Facts

1. *Facts in School Records.*—The first source for securing facts about pupils, and the one always available, is the school record. Principals and superintendents are gradually awakening to the realization of the importance of more complete records and we shall, in time, be able to include in the school record many important facts now absent The kind and number of facts recorded vary greatly with different schools. The permanent record for the intermediate schools in Seattle, here given, is a good example of the usual record card used.

School records usually contain information on nearly all of the following points· (1) place and date of birth; (2) sex; (3) name of father, (4) father living or dead; (5) mother living or dead; (6) address, (7) nationality of father; (8) nationality of mother; (9) occupation of father; (10) number of days absent; (11) number of times tardy; (12) school progress, including promotions and non-promotions, grade in school, teachers' marks in various subjects; (13) date and cause of leaving school. These facts are available to every counselor in any school and form a splendid basis for work even when they are all that can be obtained. Inadequate as they are, they will often, when taken as a whole, prove to be the means of solving many problems of maladjustment in school The chief danger is that a single fact, or a group of facts, may be taken out of its setting and used as a basis for decisions and advice that have far-reaching effects upon both pupil and school.

PUPIL'S PERMANENT RECORD **SEATTLE PUBLIC INTERMEDIATE SCHOOLS**

Name (Last name) (Middle name) (First name)

Birthplace Date of Birth (yr) (mo) (day)

Seattle Address 1 2 3

Parent or Guardian Address Tel

Occupation Bus Address Tel

Birthplace of Father

Prepared for Intermediate School at

Date Entered Grade Class

Other Intermediate School Attended How long? When?

Date left Reason

Date Re-entered Grade Class

MENTAL TEST	SCORE	C A	M A	DATE

SEVENTH GRADE			EIGHTH GRADE			NINTH GRADE		
English Composition			English Composition			English		
Spelling			Spelling			Writing and Spelling		
Social Science			Social Science			Social Science		
Mathematics			Mathematics			Mathematics		
Jr Bus Tr			Jr Bus Tr.			Com Arithmetic		
Boys' Ind Arts			Boys' Ind Arts			Boys' Ind Arts		
Mech Drawing			Mech Drawing			Mech Drawing		
Wood Work			Wood Work			Wood Work		
Sheet Met & El			Sheet Met & El			Sheet Met & El		
Printing			Printing			Printing		
Home Economics			Home Economics			Home Economics		
Sewing			Sewing			Clothing		
Cooking			Cooking			Foods		
El Art			El Science			Gen Biology		
Reading-Literature			Reading-Literature			Art		
Music			Music			Music		
Orchestra			Orchestra			Orchestra		
Physical Education			Physical Education			Physical Education		
Hygiene			Hygiene			Hygiene		
Handwriting			Handwriting			Chorus		
			Latin			Oral Expression		
			French.			Latin		
						French		

Mary was failing in three of her studies in high school. Her teachers reported her as lacking in interest and application; she did not pay attention in class and in general seemed to care little about her work or her teachers. Her teachers recommended that she be advised to withdraw from school. One of the teachers, being especially interested in her, looked up her complete school record and found that in the grades Mary had made an excellent record and was, in fact, very close to the top of the class. She was of Italian parentage and her mother was not living She had been repeatedly tardy and not infrequently absent. These facts, when taken into consideration, pointed to a possible cause of her failures and resulted in an investigation into the home conditions This investigation revealed the following facts: (1) her father had no sympathy with her desire to go to high school but wanted her to stay at home and work, (2) she was the eldest of a family of six and had to take care of her brothers and sisters, cooking and sewing and caring for the other household duties before school and after school, on Saturdays and Sundays. She had no time at home for study and was so tired when she came to school that it was physically impossible for her to do good work These facts threw an entirely different light upon Mary's failures and immediately pointed to a possible method of remedying the difficulty They indicated, as well, the need for a consideration of *all* the facts in the case, not only those on the school records, but others that could be found

2. *Reliability of Data* —Every effort should be made to make the records as reliable as possible Errors are likely to creep in unless great care is exercised at every point, some of these will not be significant, but some will be very important Place and date of birth should always be verified, when possible, by comparison with actual birth certificates The record should be *date of birth,* not *age nearest birthday* All sorts of errors creep in when recording age nearest birthday. It is just as easy to get the actual date of birth and it is far more reliable. Care should be taken to verify the data regarding father or mother living or dead Not infrequently the father is reported as dead when he has deserted his family. One of the most unsatisfactory records is that of nationality of parents. Merely to record "nationality" is to give little help. Strictly speaking, "nationality" means the nation or country to which one belongs. Hence

any foreign-born man or woman, who is a naturalized citizen, is an American, or more accurately, belongs to the United States. A negro is also an American. We should thus have listed under "Americans" foreign-born Italians, Greeks, Scandinavians, and negroes, as well as native-born men of Italian stock and "Americans" who trace their ancestry back to the Mayflower. Such facts are entirely useless. Nationality is in itself not very significant; after all, what we are after is ethnic origins and the length of time children have come under American influences. In order to be helpful, we should know where parents and grandparents were born, to what racial or ethnic stock they belonged, and how long they have resided in the United States These facts are not difficult to obtain and are, in the main, quite reliable The errors that are likely to creep in are not such as to change materially the picture.

Another very unsatisfactory item is that of the occupation of the father No satisfactory classification of occupations has yet been made. For our purposes, we wish to know *what kind* of work the father does, whether skilled, semiskilled, or unskilled, whether a trade or a profession. This will tell us something about the economic and social background of the home Merely to record that the father is a *manager* or *proprietor* tells us nothing He may own a small barber shop or he may own a large industrial plant. He may be listed as an electrician when he is actually engaged in unskilled labor Great care should be taken to find, as nearly as possible, just what kind of work the father is engaged in

The school record of days absent is usually correct, as is that of times tardy. School progress through the grades is also reliable, although great care should be taken that such records be preserved and made accessible

Teachers' marks are ordinarily recorded accurately and have real value The danger lies in the use to be made of them and in the kind of reliability that is attached to them Just what sort of facts are teachers' marks, what do they represent, and how can they be used?

Many studies have shown that teachers' marks are not reliable data regarding the ability of students, nor even regarding their actual achievement in school work. Marks given to students in history are supposed to represent achievement in history.

As a matter of fact, they represent not only the teacher's estimate of achievement in history, but native ability, effort, interest, attitude (school virtues), neatness, English, and many other things. No two teachers agree upon how much of these other qualities or characteristics enter into the mark given As usually recorded, marks cannot be taken as completely reliable measures of achievement or of ability. They are, however, valuable when considered as series of estimates by trained observers of qualities and characteristics of students Chief among these qualities and characteristics is the achievement of students in the various subjects studied. As estimates by teachers, they are facts, as definite and accurate measures of anything, they are not facts They are, of course, accurate measures of the pupil's success in school, for success in school is dependent upon the estimates of teachers. If the teacher marks him "F," he has failed, regardless of whether the teacher's mark is accurate, and if his mark is "A," he has attained a high degree of school success. Taken as a whole, through a series of years, the marks recorded of a student by a group of teachers may be considered to make up a picture of the student's achievement and his ability that is very reliable. This record should, of course, be supplemented by the results of intelligence tests and of achievement tests, as we shall later describe, but even without these helps, teachers' marks as estimates have great reliability, in general

There are many ways by which these estimates may be made more reliable than they are Some of these are: (1) agreement by teachers on what elements should be considered in making up the mark, (2) comparison of marks with objective achievement tests and intelligence tests, (3) comparison of the total distribution of marks in a given class with the normal curve of distribution to see whether there is a marked divergence from the normal curve This comparison is made much more effective and the meaning of the mark made clearer if a description of each mark is given, such as

A, *excellent. Ordinarily only from* 3 *to* 7 *per cent of a class attain this mark. Shows unusual ability. Completed all the work assigned very satisfactorily and shows initiative and originality* C, *average. Ordinarily from* 40 *to* 60 *per cent of a class attain this mark. Shows average ability. Completed the work assigned fairly satisfactorily. Shows little initiative or originality.*

The other marks are described in a similar manner. Such descriptions not only assist the teacher to make the mark more accurate, but also serve to interpret the mark to pupil and to parents. (4) Providing for a distinct or separate method of recording character traits, such as persistence, interest, reliability, effort, etc., and thus reserving the mark in different subjects for achievement in those subjects as nearly as this can be determined.

Probably one of the least satisfactory of the items usually recorded is that regarding leaving school. The only thing we really know in most cases is that the pupil left school at a certain date. If he died, we usually know that. Schools often know little about why he left school or what has happened to him after he left. He may have left to go to another school, but the record usually does not show this fact It is extremely difficult to follow up pupils after they have left and to keep in touch with them This is being attempted in various school systems, but it requires so much machinery and involves so much expense that most schools have not been able to do much along this line.

Although the causes for leaving school are fairly definitely given and recorded in most cases, it is questionable whether they are reliable as facts. To decide this question, we must know how they are secured. In most cases, the statement of the student of the cause of his leaving is taken as a fact. In other cases, the parent's statement is taken. Numerous investigations have shown that neither of these is a reliable source of information as to causes of elimination Carback[1] made a study of the reasons for leaving given by pupils and by the parents of the same pupils He found there was little substantial agreement between the reasons given by pupils and those given by parents, and in many cases neither reason given was the correct one as indicated by investigation into the actual causes.

In general, the two most frequent reasons given for leaving school are economic necessity and dissatisfaction with school, including school failures. Economic necessity has frequently been given as causing as high as 50 or 60 per cent of school leaving. Careful studies and analyses of those cases has shown that economic necessity included several radically different factors. Among these are clearly distinguished: (1) desire to go to work,

[1] CARBACK, CLARENCE, an unpublished study

to earn a living, to get money for better clothes; (2) purchase by parent or pupil of automobile or clothing on the installment plan, hence necessity for earning money to pay the installments, (3) feeling on the part of the father that elementary schooling is all that is necessary and that the time between the ages of fourteen or sixteen and twenty-one belongs to the parents The money earned by the boy during this time is a legitmate part of the income of the family; (4) Mother's death or prolonged illness. The oldest girl must be at home to look after the home, even though the father can afford to hire the work done. Obviously, these are by no means to be counted under economic necessity; they are more or less economic causes, but not economic necessity. It is now considered that real economic necessity accounts for not more than 25 per cent of school leaving This is a real cause but by no means as important as usually believed It is at once seen that dissatisfaction with or dislike of school must be considered in connection with economic reasons In the last analysis, whether a boy leaves school or not is determined by the resultant of two forces: (1) the pull of the school, and (2) the pull of out-of-school life, chief of which is gainful employment. If the pull of the school is greater than the pull of out-of-school life, he will stay in school; if out-of-school life pulls harder, he will drop out of school Anything that weakens the hold of the school—as failure, difficulty with teacher, dissatisfaction with work offered or the methods employed—by so much increases the relative pull of out-of-school life and finally will cause school leaving Anything that increases the pull of the school—as school success, pleasure in school, interest in work, companionship of others, helpfulness of teachers—will relatively weaken the pull of out-of-school life and cause the pupil to stay in school. We attempt to increase the pull of the school in several ways: (1) by strict enforcement of the attendance laws; (2) by creating public sentiment in favor of school attendance; (3) by enlarging the offering of the school so that it will meet the needs of many people; (4) by good teachers, ample equipment, and free textbooks; (5) by making school attractive. We try to decrease the pull of out-of-school life by the enactment of child labor laws and the development of public sentiment against the enployment of young people under sixteen. We

thus make it difficult for a boy or girl under sixteen to get a worth-while job

In general, the school itself is found to be a large factor in school leaving, how large is not definitely determined, but probably considerably larger than is economic necessity Under this head are included. (1) school failure; (2) dislike of teacher, (3) disciplinary troubles, (4) feeling of worthlessness of school; (5) unattractiveness of school and school life; (6) narrowness of school offerings

It is seen that the causes for leaving school are very many and extremely complicated Great care must be taken to get at the real facts In many cases, the only means of finding the real causes is to make a careful study and analysis of the home, of the occupation of the father and his income, of the general home conditions and the attitude of parents toward the school and of the adjustment of the pupil to the school Time will often reveal the fact that leaving school was due to a complexity of causes no one of which was sufficient in itself to produce the result.

In general, then, school records are valuable sources of data and must be utilized fully in securing data concerning students. Every effort should be made to see that the data recorded are reliable and that facts that are really important are included The improvement of school records is, in fact, one of our most imperative needs and is receiving the careful attention of our most progressive schoolmen.

QUESTIONS

1 What facts about the individual are essential for guidance?
2. What should be the basis for the selection of facts?
3 What facts are usually found in school records?
4 How reliable are they?
5 Are teachers' marks reliable as facts?
6 What do they measure?
7. What are the real causes for leaving school?

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CHAPTER VII

VARIABILITY AND FLEXIBILITY OF SCHOOL ORGANIZATION AS AIDS TO A STUDY OF THE INDIVIDUAL

I. NECESSITY FOR VARIABILITY AND FLEXIBILITY

1. *Value of Weighted Environment.*—Every act performed by an individual reveals something about him; every situation of life helps to bring out certain traits It is obvious, however, that certain situations are more helpful than others for this purpose Guidance, as well as all other phases of education, rests on the assumption that environment may be so selected and weighted as to bring out and to develop traits and characteristics that would not have been brought out at all by an unselected environment or at least would not have been brought out so effectively Our present traditional one-year-to-a-grade organization, with yearly or half-yearly promotions, where all types of students are taught in the same class with the same methods, and where the same standards are set for all, reveals many important traits and characteristics of students Our problem is not only to find ways and means of using the present organization to the highest degree of efficiency, but, more than that, to discover or develop a type of organization that will reveal most fully and completely those things that we need to know about students

2 *Value of Flexibility*—The fact that a boy of fourteen is in the seventh grade tells us something about him, but this fact is far more significant if the school organization is flexible enough to provide rapid promotion for him if he is bright and has fallen behind on account of illness; or if it provides for separate classes and curricula if he is of low mentality or is slow in learning, The fact that a girl has received a mark of "B" or 85. in elementary algebra tells us something about her, but it would tell much more if she were in a group of students of approximately

the same ability, or in an organization where each student stood on his own feet and created his own standard It may be helpful then, to consider some of the ways in which variability and flexibility of organization may assist in finding significant facts about students

II. Flexibility of Grading and Promotion

1 *Danger in Uniformity*—Some of the important things we wish to find about students have to do with (1) interests of various kinds, (2) degrees of ability to do the work represented by certain subjects, (3) initiative and independence, (4) leadership qualities Interest is developed and maintained by work that seems worth while to the individual, work that is fresh and vital, work that is suited in quantity and quality to the ability of each individual. The old method by which all students in the same grade are placed in the same class and required to remain in that class for a year is not conducive to the maximum development of interest. The pace set for the class is that for the average student. This is too fast for the slow and too slow for the quick. The slow are discouraged because they cannot keep up; the quick lack interest, for nothing compels them to work up to their ability. There is no chance for them to get ahead before the end of the year, so "why work?" The slow look forward to the repetition of the same work another year Nothing is quite so deadening to interest as to go over the same work in the same way with the same teacher. Many schemes have been tried out to remedy this evil.

2. *Flexibility of Promotion.*—It has long been recognized that pupils vary in their ability to complete a given piece of work in a given time The old, unorganized school of colonial times, like the one-room country school of today, allowed a pupil to progress as rapidly as he could, or as he cared to progress. It was not until 1847 that grades, in the modern sense, were introduced into our schools. Each division or "grade" was apparently thought of merely as a convenient division of the work to be done and in no sense indicated the time to be taken in accomplishing the work.[1] On account of the convenience of classification

[1] Philbrick, John D, Report of Superintendent of Schools, Boston· *Barnard's American Journal of Education*, 19. 476, 1869

and ease of administration, the grades or divisions early came to be considered as "years." There grew up the pernicious idea, that is now so general, that a *grade* is a *year* and that all students should complete a grade in a year, regardless of their ability or lack of ability This is reflected in our terms "the eight-year elementary school," "the four-year high school," etc., when we should mean an elementary school where the work is divided into *eight divisions*, the high school where the curriculum is divided into *four divisions*. These divisions are merely for convenience. We could as well, and often better, divide the entire curriculum into 16 or 24, or even more, divisions. There is no reason either why we should think of these divisions as being equal either in amount or in difficulty. Teachers and administrators have recognized the difference in abilities of students, it is altogether too apparent to be overlooked One remedy often applied has been to increase the number of divisions and to provide for promotions twice a year. This has helped because under such a plan the failing student needed to repeat only a half-year's work and the bright student could more easily be allowed to skip a grade and thus move along faster. This has provided a much greater incentive to both the dull and the bright pupil. Superintendents have not infrequently carried this several steps farther and have provided for promotions four times a year, or monthly, or any time when the pupil was ready Obviously, such a plan reveals to a much greater degree abilities and interests of pupils than did the one-year-to-a-grade inflexible program.

III Homogeneous Grouping

1. *The Double-track Plan.*—Many devices have been used to provide for differences in quickness of learning and quality of learning Some of those most commonly used provide for a division of the pupils in any school or grade into two or more parts according to their speed of learning or ability to do the work of the school. Some of these provide for the organization of the work of the entire school into "tracks" or courses. The double-track plan outlined the work of the eight grades or the elementary school in two "tracks" something like that shown in Fig 8. Track *B* has eight divisions; this is for the average

or "normal" pupil and calls for the completion of the work of the elementary school in eight years Track *A* is for the quick-learning pupil and would enable him to complete the work in six years. At the end of the fourth "grade" of *B* there is opportunity for a shift either from *B* to *A* or from *A* to *B*, so that adjustments can be made in either direction, allowing a pupil to complete the work in seven years
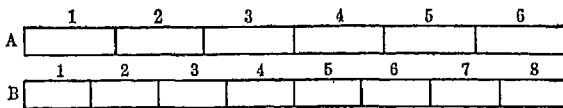
FIG 8.—The double-track plan.

2. *The Triple-track Plan.*—A triple-track plan is in operation in some junior high schools Figure 9 will serve to indicate the general features of the device:
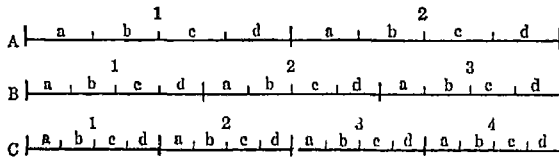
FIG. 9 —The triple-track plan

A is the track laid out for the quick student, *B* for the average, and *C* for the slow *A* provides for completion of the work in two years, *B* in three, and *C* in four years Each year is divided into four divisions At the end of the *b* division of *A* there may be a shift in any direction; there is another opportunity at the end of *A*1 and at the end of the *b* division of 2 A pupil in *A* might at the end of the first half-year transfer without loss to the *B* section and complete the work in two and three-quarters years, or to the *C* section and complete it in three and one-half years So a pupil in the *C* section might at the end of a year be transferred to *B* and complete the work in three and one-quarter years, or even to *A* and complete it in two and one-half years.

3 *The Multiple-track Plan.*—Still another plan arranges the work in such a way that tracks of varying length are laid out

from the first grade through the high school. Figure 10 shows this:
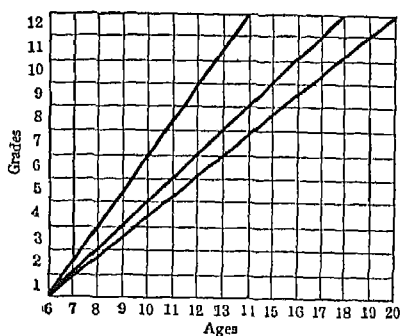
FIG 10.—Multiple-track plan

In this diagram, the horizontal divisions represent years, beginning with six, the age of entrance into the first grade; the vertical represent grades in school Normal progress is represented by each square, shown in the middle line. Each year should show the completion of one grade. Thus, the normal or average pupil would take the course indicated by the middle line, and would be eighteen years old when he completes the high school The course laid out for the bright pupil would call for the completion of the work in less time than this and can be shown by drawing a line from the lower left-hand corner to any age as sixteen, fifteen, fourteen, etc. One such course is shown at the left of the center. This shows that a pupil taking this course would complete in the first year all of the first grade and about half of the second grade and would graduate from high school at fourteen. The course for the slower pupil would be indicated by a line drawn from the lower left-hand corner to any age, eighteen, nineteen, twenty, etc The one shown at the right calls for the completion of less than the first grade work in one year, the fifth grade in six years and completion of the high school at twenty. At the age of twelve, the bright pupil has completed the ninth grade, the average pupil the sixth grade, and the slow pupil the fifth grade.

But we are interested in plans of this sort not as administrative devices for adapting the work to the ability of the student, but as aids to finding significant facts about pupils How will

such flexibility assist in this phase of guidance? It has all the advantages of the rapid-promotion plans described above in providing a stimulus to both bright and slow pupils to do their best and thus reveal their abilities and interests In addition it has at least two other advantages:

1. A student's entire course is so planned as to meet his ability-to-learn needs. He progresses at an even rate and not by leaping or skipping a grade or by dropping a grade and repeating. He skips nothing that is necessary; he repeats nothing that is unnecessary. In such a scheme, the abilities of pupils are much more easily seen and their progress is made more uniform

2 Each student is placed in a group more nearly equal in ability than under the old plan. The differences in ability are not entirely eliminated but are made much less. The bright pupil has competition that is effective in making him work at his best; the dull student finds that he can really accomplish about as much as his fellows and is encouraged by his success to continue By homogeneous grouping, the problem of the selection and certification of students for colleges is greatly simplified Rarely will a student in the *C*, or lowest, division be encouraged to go to college, for he has demonstrated that his general learning capacity is below that required for college work. Most of those in the *A*, or highest, group have the ability to be successful in college. Whether they will go to college or not will depend upon their preparation for entrance, their desire to go, and their financial situation. Some in group *B* should go to college, of course, but those who are encouraged to do this should possess certain other qualifications—character and personality traits—that would indicate their fitness and the probability of their success. The group in which the largest number of good college risks lie will undoubtedly be group *A* Restricting the college group first to *A* and secondarily to *B* will make possible a more careful study of the individuals of the groups and enable us to learn more significant facts about their interests, their rates of learning, and their abilities.

Sometimes homogeneous grouping does not provide for shortening the time of the school but merely organizes the work so that each section has a different kind of work from the other. The lowest, or poorest, section has a course that is reduced to the minimum essentials. Each higher division or section has

an enriched course. Thus, the highest section is covering the same ground in the same time as the lowest section but doing it more thoroughly, using more difficult material and going farther afield for enlargement and enrichment While no authoritative statement can yet be made regarding the superiority of the enrichment plan as compared with the rapid advancement plan, the trend of opinion from actual experience is at present decidedly in favor of a plan that provides for both enrichment and rapid advancement for the bright pupils. This plan is illustrated in Fig 11.
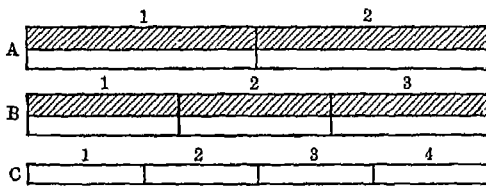
FIG 11 —The plan of varying time and enrichment.

This diagram represents the junior high school. Here the pupils in *C* complete the minimum essentials in four years, with no enrichment. Those in *B* complete the course in three years with some enrichment, those in *A* complete it in two years with considerable enrichment of content Such a plan is not only practicable but, obviously, serves much better to give information about the varying abilities and interests of pupils than does either the enrichment plan or the rapid-progress plan when taken alone.

4 *The Eureka Plan.*[1]—The school plan used in Eureka, Calif, has certain unique features well worth consideration

The part of this plan that is of special interest for this discussion is well shown in Fig 12.

This figure shows that the students of the school are divided into five "purpose groups."

When a student registers for work at the high school he and his parents are questioned in an effort to determine how long the student expects to remain in the school and what he expects to do after leaving the institution . . If the student expects to be graduated and to be

[1] JENSEN, GEORGE C, The Eureka School Plan in *Practice in Vocational Guidance*, Editor, Frederick J Allen, New York· McGraw-Hill Book Company, Inc, 1927, pp 16–36.

recommended for admission into some institution of higher learning he is classified in Group I and his course arranged accordingly He is then advised that if he expects to gain recommendation to one of the
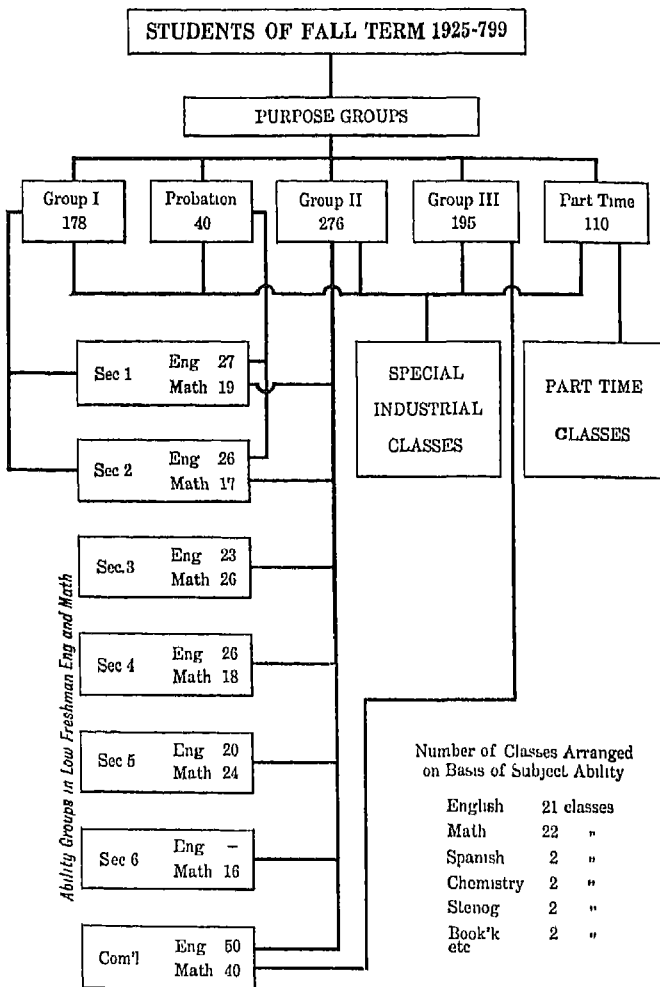
FIG 12 —The Eureka plan

larger universities he must be classified in Group I at the time of his high-school graduation. If he gets a mark lower than a 2– (a 3– is the passing mark for the school) in one subject he is transferred to the Probation Group—the second group shown on the chart. If he

gets marks lower than 2— in two or more subjects, he is transferred to Group II or III, according to his election at the time. He is advised, too, that being dropped from Group I does not necessarily mean that he must abandon his proposed college training but that he must either correct his weakness or select a college with lower admission standards. . . .

It will be seen, then, that by classifying the potential university student in a special group, the home, the school, and the student himself are all in the business, during the four years of high school, of measuring the student for the qualities needed for a successful university career This scheme involves a measure of vocational guidance, for, if a student is not qualified by ability and willingness for the objective toward which he is striving, the sooner he makes that discovery the better It becomes then a matter of shifting his aims and of taking, while in high school, those courses which he needs. . .

There is another phase of this grouping of the potential university students which should be and is inviting the attention of universities. It makes possible a much more thorough selection of students for higher institutions of learning than is possible under a system resting on recommendations or examinations It makes it possible too for the universities to present to their future students certain facts about universities which students should have long before they arrive on the campus. . .

The Probation Group is a kind of anteroom to Group I. It is composed of students from Group I who have received too low a mark in not more than one subject and of students from other groups of the school whose work is sufficiently strong to warrant this classification In either case these are students who wish to try for university admission This Probation Group is necessarily small for no student remains here longer than one or two terms

Group II is made up of that large number of students who wish to be graduated from high school but who do not expect to enter any advanced institution, and of such students as are dropped from the two groups described above As will be seen by the figures given elsewhere in this report some of these students are sent to smaller colleges, due to the fact of lower admission standards But, on the whole, the students in Group II have as direct objectives, positions in the community . .

Group III is composed of those many students, too often neglected, who drop out of high school after one, two, or three years These are the students who either are not interested in being graduated or or have found it impossible to make the grade. Usually they have

the most direct objectives; they want jobs and they want them immediately .

The Part-time Group consists of students between the ages of sixteen and eighteen who are required by law to be in school at least four hours per week

These five groups make up the entire student body of the school While there is a very definite relation between these groups and ability and willingness to work, this relation is not consistent because of the fact that many able students do not wish to go to college and so are classified in Group II instead of in Group I. Still other able students are classified—because of their objectives—in Group III What this scheme really does is to classify students in terms of their objectives and thus affords all concerned an opportunity to study them from these angles. It is a process of segregation on a fundamental basis, so that the school may be ever conscious of the fact that persons differ in purpose just as they differ in ability, and that very often it is necessary and desirable to cause a shifting in purpose. This classification also furnishes a basis for setting up different kinds of classes in the various subjects.

It should be noted that the "purpose groups" and "ability sections" are not identical There are some high ability students in every purpose group. This is clearly indicated in Fig 12.

The graph shows the actual organization of the Low Freshman English and Mathematics classes during the spring term of 1925 It will be noted that there were five sections in English and six in mathematics besides the special classes in commercial English and mathematics. These sections were arranged according to student ability in the particular subject, section 1 being the highest All of the sections of a subject met at the same hour so that students could readily be shifted from one section to another without disturbing any other parts of their programs. A student could be shifted in one subject regardless of shifting in any other subject. A student might be in a high section in one subject and in a low in another. This scheme gives complete elasticity . . .

Besides the classes shown on the chart, all other Freshman and Sophomore English and mathematics classes, two classes in Spanish, two in chemistry, two in stenography, two in bookkeeping—a total of 51 classes, were organized in this manner during the spring term of 1925 . .

The great value of these ability sections is that they afford an opportunity for fixing a number of widely differing standards in the same subject . . .

There is a wide range in the standards set for these different sections, some students moving three and four times as fast and as far as others It is difficult to compare students, however, for very often they move in radically different directions . . .

Sections 1 and 2, as indicated on the chart, are recruited primarily from the Purpose Groups composed of students who expect to attend some higher institution after being graduated from high school It will be noted, however that Group II is also represented in these higher sections, indicating that some very able students are in Group II. When sections lower than section 2 are considered, all of the students come from Group II . . .

It will at once be seen that such a plan would assist very materially in the solution of certain guidance problems. While it may not be possible or desirable to copy the exact plan here described, it offers many suggestions for improvements in the organization and administration of the secondary school that will make it possible to provide more effective guidance.

IV. Individualized Instruction

1 *Individualized Instruction the Logical Outcome of Homogeneous Grouping.*—The various plans now grouped under the head of individualized instruction are really the logical outcome of homogeneous grouping, if carried out fully. Groups divided according to ability merely decrease differences. If you provide for three groups, the range of ability differences in each group is less than it was in the class as a whole. If five divisions are made, the range is less in each division than in three; if ten divisions are made, the range is still less If smaller and smaller divisions are made, you finally come to the individual and you have a "group" composed of one individual This is individualized instruction. We are not here concerned with the general description of the various plans nor with the ways in which they vary one from another, but merely with the opportunity they give for learning more about each pupil.

2 *Plans in Operation.*—The two plans most commonly known—the Dalton Plan and the Winnetka Plan—each provide for (1) a clear statement of the work to be done, the assignment or "contract"; and (2) *individual* responsibility for completing the work assigned. The assignment is a contract made between

each individual student and his teacher; it is not a group contract and can be fulfilled only when the teacher is satisfied that the pupil has actually *himself* completed the work. The time element is comparatively unimportant and it varies with the pupil The pupil is responsible, under guidance, for scheduling his time so as to complete the contracts Each pupil's progress is judged by his own ability to progress. The Winnetka Plan, especially, provides self-testing devices so that each pupil can test himself before he presents himself to the teacher and see whether he has really completed the contract.

These plans are calculated, in a far greater degree than homogeneous grouping, to bring out the ability of each pupil, to make each individual work up his maximum, and to throw the responsibility for the work more largely on the pupil himself. When this is done, it is clear that more definite and useful information can be secured about each student than in any other way yet devised.

V THE JUNIOR-SENIOR HIGH-SCHOOL ORGANIZATION

1. *Plan of Organization.*—By far the most helpful plan or organization now in operation is the junior high school or some modification of the 6-3-3 plan. Junior high schools have met a real need and are very rapidly spreading throughout the country. This plan provides for an elementary school of six grades instead of eight and for a secondary school of six grades, usually divided into a junior high school and a senior high school, each of three grades.

2 *Advantages of the Plan.*—The 6-3-3 plan is admirably adapted to assist in the guidance program for several reasons. (1) It shifts the break from the elementary into the secondary school from the end of the eighth grade, at a normal age of fourteen, to the end of the sixth, at a normal age of twelve, and thus enables the secondary school to reach the great majority of pupils before they have reached the legal age for leaving school. (2) It provides for differentiated work at least one year earlier than the old plan, and even the work of the seventh grade is reorganized and better adapted to the needs of young people at that stage of development (3) One of the chief purposes of the junior high school, and one universally accepted,

is to provide for exploration and experimentation. (4) A regular part of the junior-high-school program is the organization of student clubs and activities.

By keeping pupils in school longer we are able to learn important facts about many who would, under the old plan, have dropped out of school altogether and thus have been beyond the possibility of guidance. A definite program of differentiated work, of try-out courses, of reorganized content enables the pupils to learn more about themselves, their interests, and their abilities, and to become acquainted with the major fields of human activities. Courses are organized for the particular purpose of studying occupational opportunities to find what abilities are necessary for success in each, and to bring together useful information about their own abilities and interests Counselors are provided whose business it is to gather together facts about pupils, about schools, and about occupational problems. Pupils are encouraged to study, to investigate, to try themselves out in various studies, in out-of-school jobs, and in student clubs and activities to discover their own interests and abilities

3. *Value of Records* —One of the greatest values growing out of the reorganization into the junior-senior high school plan is indirect The new plan was brought into existence in order to provide better for the varying needs of students. It has sought to find out what these needs are and has provided for opportunities to explore and to experiment. Accordingly, junior high schools, especially, have placed great emphasis upon records; they are more careful than other parts of the school to keep definite records of facts that have come to light and that are useful in the guidance of students.

QUESTIONS

1. Will ability show itself no matter what the school environment may be?
2 How will special classes assist in learning facts about individuals?
3 What different plans are in operation for homogeneous grouping?
4 On what basis are initial classifications made?
5 Can enrichment be provided for without producing additional achievement?
6. What are the advantages for guidance purposes of individualized instruction?
7 Does the junior high school keep more pupils in school?
8 To what extent are try-out courses organized in junior high schools?

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CHAPTER VIII

TRY-OUT AND EXPLORATORY ACTIVITIES AS METHODS OF INVESTIGATING THE INDIVIDUAL

It is undeniably true that everything that an individual does reveals something about him In Chap VII we have seen how a reorganization of the school may materially assist in this revealing process by providing an environment that is favorable to the development of certain traits or to the recognition of their existence In this chapter we shall describe some methods and devices organized more definitely and specifically for this purpose

I. THE MEANING AND FUNCTION OF TRY-OUT AND EXPLORATORY ACTIVITIES

1. *Complexity of Function of Try-out and Exploratory Activities.*—It has been pointed out again and again that there can be no hard and fast distinction between the various phases of guidance. This is just as true of the various methods employed in the processes of investigation and of guidance; each is inseparably bound up with every other. This is especially true of those activities we designate as try-out and exploratory. These activities perform three chief functions: (1) securing facts about the individual; (2) securing facts about courses and schools and about occupations; (3) guiding the individual These functions are, however, not distinct; they are parts of the same process This may be shown by taking any activity that is classified as exploratory

The pre-modern language course listed among those used in Okmulgee (p. 130) shows these three functions very clearly: (1) It reveals to the teacher and to the individual the presence or absence of the capacities, aptitudes, and interests, required in the activities comprised under the study. (2) It enables the student to know by actual experience something about what he would have to do if he went on to a study of French, German or Spanish and also some of the things he would have to do if he

wanted to go on to college or university. (3) By the very process of exploration and try-out it furnishes the best basis for intelligent choice by the individual himself and this becomes a part of the guidance process. All general courses are of the same nature and show the same functions They also afford the opportunity to develop interests in new fields. The general shop, described on pages 337 and 338, also shows the same functions: (1) It reveals to the student and to his teacher capacities, aptitudes, and interests and does this in a situation that is much more nearly like actual shop conditions than is true in the usual industrial-arts courses (2) Because it is organized somewhat like a commercial shop, it enables the boy to know from actual experience what he would have to do if he goes into that line of work (3) It helps him to choose for himself what he will do in life.

2 *Exploratory Nature of All School Work*—Exploratory and try-out activities are as broad as the entire program of the school Each activity in class and out, the formal studies and the clubs, are agencies for exploration and try-out

> The adolescent explorer passes through consecutive stages on his journey of exploration during his junior high school years. First, he adjusts himself to his new environment that he may learn how most effectively to benefit by his exploratory experiences; second, he enters upon his exploratory activities; third, he makes a tentative selection of an educational placement which makes a particular appeal to his individual interests; fourth, after the testing of his choice, he undertakes the initial stage of his differentiation into a curriculum group. When the foregoing steps have been taken, he is ready for specialized training of his choice in the senior high school [1]

3 *Variation in Names of Exploratory Courses*—While the entire program of the school is exploratory in nature, there are courses and activities that are organized especially with this purpose in view. It is impossible at present to give to these various courses and activities a name that is universally accepted. Courses now organized with more or less of the try-out idea are grouped under the following titles: survey, introductory, general, acquaintance, self-discovery, preview, threshold, vestibule,

[1] NATIONAL ASSOCIATION OF SECONDARY-SCHOOL PRINCIPALS, Committee on Guidance, Guidance in Secondary Schools, *Bulletin* No 19, Cicero, Ill., January, 1928, p 32.

try-out, finding, sampling, prevocational, exploratory, orientation They are given in all types of school from junior high school to college and university. It will at once be seen that these vary in their relative emphasis upon various objectives, some emphasize the preview of a later course or group of courses, others emphasize the exploring phase, while some have the try-out idea uppermost. Nor is it entirely clear what the technical difference is between "try-out" and "exploration." In so far as any difference is recognized, exploratory courses aim to give the student an opportunity to explore, to get acquainted with new fields of study. Try-out is also used with the same idea in mind but usually the term emphasizes trying out the individual or giving him an opportunity to try himself out There can be no clear distinction between these two functions nor would it be wise to organize courses specifically for one or the other function. The two functions are inseparably bound together and interact one upon the other Whenever a student studies a new course, he explores a new field and gets some idea of what lies ahead, he also tries himself out and reveals to himself and to his teacher something about his abilities, his interests, his likes and dislikes The self-revelation shows him his abilities and interests, and, at the same time, the exploration he has made shows him what present and future courses are like. The two together are essential to a proper selection of courses, of activities, and of vocations

4. *Plan of Discussion* —The diversity of function in these courses makes it extremely difficult to discuss them under the divisions of this book as organized.

Even at the risk of obscuring the essential unity of the functions, we shall attempt to divide the discussion of the various phases of exploration and try-out activities and take up separately the three functions of (1) getting facts about individuals, (2) getting facts about courses and schools, and occupations and (3) guiding individuals Under each of these divisions we shall discuss in more detail those activities that seem to emphasize a particular function.

In this chapter we are concerned mainly with methods of securing facts about individuals The second function, securing facts about courses and schools and occupations, will be discussed in Chaps XV and XVI. The third function, guiding students, will be considered in Chaps. XVII, XVIII, and XIX.

In this discussion, we may distinguish three parts of our curricular organization that are especially useful for try-out and exploration: (1) the "regular" school subjects, especially the core subjects; (2) short-unit courses; and (3) student activities.

II. Regular or General Subjects

1. *Exploratory Value of All Subjects.*—It is clear that, whatever our attitude may be regarding the value of special exploratory courses, we must rely very largely upon the general subjects for the discovery and revelation of the abilities and characteristics of individuals. Students spend most of their time and energy in activities connected with the regular curriculum Construct a complete program of studies according to generally accepted principles and not much of the time of any student will be left for other activities As far as the junior high school is concerned, this statement applies to the core subjects—those required of all If this is true, what are the traits and abilities that we may expect to be revealed through the general subjects?

Here we would list first, those so-called general traits and characteristics described more fully in Chap. X Some of these are honesty, persistence, initiative, self-control, and patience. Every day provides opportunities for revealing, as well as developing, such traits Constant repetition of situations such as occur in the ordinary classroom makes it easily possible for the teacher to distinguish many of these characteristics General mental ability, the ability to think in abstract terms, quickness of reaction, physical and mental, are also clearly revealed. There is abundant opportunity for the revelation of special abilities and interests in fields represented by the various subjects, writing, debating, speaking, mathematics, history, Latin, biology, chemistry, physics, and many others Literature and history are especially fruitful in providing the means by which interests and abilities may be revealed, not only in those special fields, but in practically any other line of human endeavor. All of these subjects, then, are clearly "try-out" in their function

2. *Limitations of Present Organization.*—It must be clearly recognized, however, that decided limitations are placed on the try-out function of these general courses by the present organization of the materials in these courses and by the general methods

of instruction used. The try-out and exploratory functions should be more clearly and consciously recognized in the selection and organization of materials in all subjects than they are now. With the usual organization of courses and materials, it is practically impossible to provide opportunity for try out in all desirable lines of activity In the ninth grade, for example, all students must take English, mathematics, social studies, and physical training In many schools this is, in reality, English, algebra, history, and gymnasium work. For the other major subjects, the college preparatory student takes Latin or French and the commercial student takes some commercial subject, typewriting or junior business practice. There is left only a little time for other work such as industrial arts, home economics, music, etc. In this plan, it is not possible for a student to explore or to try himself out in science, commercial work, and foreign languages. He must choose between them and, if he chooses one, he cannot take the others. In the college preparatory curriculum, also, he is often limited to history and cannot try himself out in civics. The sad fact is that with such a selection of subjects try-out in all desirable lines is impossible.

3. *Need for Reorganization* —There is great need, then, for a reorganization of subjects so that all can get the try-out that is needed and can explore fields now impossible for them to explore. This is the chief basis for the organization of the "general" courses such as general science, general mathematics, general social studies, and general language. These courses present an entirely new selection and organization of materials based, not upon the organization of the subject, but upon what are taken to be the needs of the students The general science course will illustrate this.

This course of study has practically abandoned the former closely drawn distinctions between its constituent parts of biology, physics, chemistry, and physiography It is organized as a survey course of the whole field of science and is designed to interpret the early adolescent environment in respect to its explanation from the viewpoint of science. It deals, therefore, with the simpler aspects of the phenomena of science. Objectively, it seeks to interpret to the inquisitive minds of young adolescents the common things of their everyday life, to train powers of observation, and to initiate pupils in scientific methods of investigation and experiment

At the same time, this course affords an opportunity for pupils to test their aptitudes for special sciences. That is, it explores aptitudes for further science study and reveals the possibilities of the more highly specialized sciences. The fundamental junior high school objectives are realized without sacrificing other underlying principles of articulation with nature study and the scientific elements of geography and of orienting senior high school sciences.[1]

Moreover, these courses are part of the core curriculum, required of all students because it is considered necessary for every pupil to explore these fields and to have a chance to try himself out in each line of activity. There is, also, the same necessity for reorganization of material in English to make it better suited for exploration and try-out.

4. *Reorganization of Method.*—Nor is the reorganizaton of material and courses the only change necessary. One of the greatest needs is that of reorganization of methods of instruction. The personality of the teacher and not the subject, the method of instruction, and not the material studied are often the best means of exploration and try-out. A poor or a dull teacher will make any subject uninteresting, however interesting it may be in itself, and motivation is necessary before students will put forth their best efforts Initiative is not revealed unless there is something worth while to do. Persistence ceases to be a virtue when the work seems useless To reveal abilities and interests we must have material that is in itself valuable, that appeals to the student as worth while, and we must provide a real compelling, impelling motive for work. We must so organize our class routine that there is a real vital place for initiative, independence, and self-control.

III. Short-unit Courses

1 *Nature of Short-unit Courses.*—Short-unit courses of half a semester or a whole semester are another type of exploratory activity frequently employed to test the aptitudes of pupils for the elective courses in the junior and senior high school programs of studies These short-unit courses provide from four to eight exploratory experiences for pupils in the seventh and eighth years. They are short exposure courses

[1] National Association of Secondary-school Principals, Committee on Guidance, Guidance in Secondary Schools, *Bull.* 19, Cicero, Ill., January, 1928, p. 35.

and usually elective Their specific purpose is exploration. They are not usually component parts of the core curriculum The very nature of the courses does not guarantee their continuity. They become a minor part of the whole experience of junior-high-school pupils.

The elective principle involved will assure all pupils some exploratory experiences but it cannot assure all pupils all the exploratory experiences of a continuous and progressive core curriculum of constants. The short-unit courses are likely to result in the elimination of some fundamental core subject, frequently science, the coordination of English and Latin, the introductory course to business life, the arts courses, and occasionally even social studies, all of which are component parts of the general-education objective which the junior high school should not interrupt even temporarily Short-unit courses tend, therefore, to become short-circuit courses [1]

Great care should, therefore, be taken to prevent this

2. *Small Time for Short-unit Courses.*—It has already been seen that there is very little time left in the program of the junior high school for distinctively try-out courses. Many schools are, however, experimenting with these so-called short-unit courses for exploration and try out. Many schools confine them to industrial courses Some organize them in such a way that a boy works in ten different school shops in the course of a year, thus trying himself out and exploring various kinds of shop activity.

3 *Short-unit Courses in Okmulgee.*—A somewhat more pretentious program of short-unit courses is that in operation in Okmulgee, Okla., and described by Eugene S. Briggs, the superintendent:

Twenty-eight finding and broadening courses are offered. These courses are nine and eighteen weeks in length They offer a sampling, as it were, of the various fields of activity They are called finding and broadening for two reasons· "Finding" because, in the opinion of those who have studied them throughout the experimental period since their organization eight years ago, they assist materially in finding the new courses to be taken in high school and which likely will be continued in college In many instances they have materially assisted the individual in finding his life work. "Broadening" because they enrich the experiences, extend the interests, and broaden the

[1] NATIONAL ASSOCIATION OF SECONDARY-SCHOOL PRINCIPALS, Committee on Guidance, Guidance in Secondary Schools, *Bull* 19, Cicero, Ill, January, 1928, p. 36.

sympathies of those who follow through. Each course has for its initial objective the cross-sectioning of one major field of activity.

Before any course of study is developed or curriculum built, it is necessary that certain well-defined aims be recognized and outlined. The following aims for the exploratory courses are offered

1 To acquaint the pupil, by a try-out or a sampling process, with the possibilities in the vocational fields of activity

2. To offer a choice of future work, through a glimpse at the represented typical cross-sections of the major fields of activity, to explain the more advanced situation, and to show the possibilities if the pupil will but persist in school.

3 To acquaint the pupil, through a previewing procedure, with the specialized secondary school courses

4 To give the pupil, through reliable experience, an estimate of his educational adaptabilities early in his career.

5. To present only material in itself worth while to the extent pursued and entirely justifiable from a pedagogical standpoint

Attention is directed to the fact that finding and broadening courses are not confined to courses in industrial work, as is sometimes wrongfully supposed and advocated by some It is just as necessary to give the boy an idea of the demands made upon one by the legal or medical profession as it is to introduce him to the desirable and distasteful offerings of the machine shop. The following finding and broadening courses are given in Okmulgee·

Preparatory Class	Subfreshman Class
Art	Art[1]
Auto mechanics	Auto mechanics
Cooking	Building trades
Electricity	Business
Expression	Cooking[1]
Home nursing	English-Latin
Journalism	Interior decorating
Mechanical drawing	Mechanical drawing
Music	Music
Science	Premodern language
Sewing	Printing
Vocational information	Public speaking
	Sewing
	Sheet metal and forging
	Vocational information
	Woodwork

[1] Those courses repeated in the subfreshman year are of two kinds (1) regular nine weeks' course in another section of the great field, (2) an eighteen weeks' course continuing the nine weeks' study in the preparatory class

It was the tendency at first to teach too much subject matter and facts The teachers, not being accustomed to teach directly about the activities of life, confined themselves to recorded tables and lists of vocations, but soon they began to see that the important thing was for the teacher to allow the pupil to learn about these great fields of humanity by actually living in replica, "getting out and getting under," "shooting the trouble," making "the plea" in a courtroom, producing something of value in a shop.[1]

4. *Some Unsolved Problems.*—Some of the principal unsolved problems in connection with short-unit courses are the following: (1) the selection and organization of material that is worth while in itself—for other reasons than mere exploration; (2) the determination of the length of time to be devoted to the course It is reasonable to assume that subjects would differ in the time necessary to get something of worth out of them Possibly some would yield worth-while results from a month's study while others might take a year (3) The determination of the unit or credit value for each course Some contend that short-unit courses should not count toward graduation Others say that if worth-while educational values are to be achieved by short-unit courses, they should count relatively the same as other courses.

5 *Need for Further Experimentation.*—Much experimentation will be necessary before these problems can be solved and before short-unit courses are accepted as necessary or desirable in our regular program. In general, we may say that while there is some place for the short-unit course, as such, greater help may be looked for in the reorganization of general courses and in the readaptation of method.

IV. School Life and Student Activities

1. *Activity as the Basis of All Education.*—The field of activities, often miscalled extra-curricular activities, has received increasing attention during the last decade. This is because we are recognizing the fundamental educational value of activity as a basis of all learning and of all education It is also a recognition of the educational value of less formalized procedure in learning and of a larger measure of self-direction. Under

[1] Briggs, Eugene S., Exploration in Junior High School, *Proceedings of the National Education Association*, 65 665–67, 1927.

student activities are now included all kinds of clubs, athletics, dramatics, student participation in government, and school life in general.

2. *Unique Value of Student Activities.*—The value of these activities for try-out and exploration is now recognized to be very great. Since there is a larger degree of freedom and a lack of formalized procedure, qualities of leadership, initiative, and independence are given an opportunity to reveal themselves. Interest and ability of a specific nature are often shown far more clearly than in the classroom. Dramatic ability, not suspected in the study of the English classics, is brought out, skill in construction is revealed by activities in a radio club or in the Boy Scouts or in a science club. Ability in public speaking or debate is revealed in debating or public speaking clubs and directly influences the choice of a profession, interest in securing news items on the school paper or talent for writing stories or ability in business management are often brought to light by various activities in connection with the school paper. These interests and abilities thus brought to light are often far more significant than those shown in the regular class.

These activities should be so organized and directed that they supplement the regular curriculum of the school and provide ample opportunity for exploration and try-out in various kinds of activity. They should be considered as indispensable parts of the curriculum offering of the school

3 *Need for Discovering Abilities.*—One of the principal difficulties met with in the utilization of student activities for try-out purposes is that little, if any, systematic attempt is made to search out students who have ability. It is left largely to chance. Students often join a club because of the personality of the sponsor and not because of any interest in the activity represented by the club. There is also little attempt to make a record of interests and abilities revealed by participation in the various clubs

4. *The Tacoma Plan.*—A very interesting and hopeful plan is now in operation in the high schools of Tacoma, Wash, to secure information about students' interests and abilities and to provide opportunity for their utilization and development.

This system was devised by Miss Gladys Parker of the Lincoln High School, Tacoma, Wash. A full set of cards and directions

are used that explain fully the working of the plan A few quotations from the Instructions to Students will serve to make clear the part of the system that is concerned primarily with recording activities and discovering abilities

Have you ever thought that it would be good to have a record of the work and play you do in the extra-curricular activities of the school? Has it ever occurred to you in watching another boy or girl work in some organization that he was showing a mighty fine spirit or engineering a splendid project through to completion? And would it not be good if you could report such a demonstration of ability and know that it would be permanently recorded to the credit of your friend?

A plan has been devised which will do those very things and whether or not that plan is a success depends on you students

Obviously it must be a *going* record which will show increase in and withdrawal from student activities by any student It must be elastic. It must be complete in necessary detail and it must be concise in form. It must be indexed in two ways so that the record will show all the activities engaged in by any one student during his school life, and also it must show under the heading of any one activity, all the students interestedly active in that activity and just what each is doing or has done while he was a member.

If you will follow the instructions given for the initial entries, and assist your organization to report special abilities of students as you observe them, such a record will be made Probably you are aware that colleges and universities as well as business men are demanding such a record During your school life this record will help you in choosing people for work on committees, for the opera, the class play, and in many other ways that occur to you.

The initial entries will be made by the student in his roll or home room and instructions follow for these initial entries.

Special care must be used in making out these cards. The student should study the cards, think of the purpose of the system of which his cards are to be a part.

Instructions to Students for Initial Entries

You have been given two types of cards, one called the *student index* and the other the *activities index* card. You have *one* Student Index and one or more Activities Index cards

Student Index Card.—Fill out the part of this card as indicated This will become the "key" card and will show a record of all the activities in which you participate during your school life It will also show any special work that you do, or office that you hold in these

activities. But for the present, enter on it only the activities in which you are *now* engaged On the back fill out only the blanks asking for your name. The *Ability Indicator* will be explained later

Activities Index Card—Fill out one of these cards for each activity in which you are *now* engaged You are automatically a member of your class so you will fill out at least one of these cards You will also fill out, in addition to that, one for each other organization of which you are a member, for instance, one for Hi-Y Club, one for basket ball, one for Senior Orchestra, as well as one for your membership in the Senior Class. On the back write only your name and the name of the activity represented by the card. The *Ability Indicator* will be explained later

When you have made the initial entries on these cards, return them to your teacher who will return them to the *Student Activities Record Corps*, a group of clerks who will enter them in the permanent files for record to your credit. Later changes, such as membership in other organizations, elections to office, appointment on a committee, withdrawals, will be reported by the secretaries of the organizations and returned for entry and permanent record to the clerks in the *Student Activities Record Corps* . .

The Ability Indicator

Without any doubt there is much ability in the school that we know nothing of for a number of reasons. For instance, there are students who are splendid workers but who are diffident and perhaps self-effacing. There are students who are active in extra-curricular work, but not in such a way as to make an outstanding record of ability, as for instance, the good harmonizer, the pep generator, the person who does excellent work in a minor position on a special committee. Sometimes those people stand out, but many times they do not. Perhaps they, themselves, are totally unaware that they are exceptional or that they have latent possibilities which may be or may become extremely valuable. These things are observed by the other fellow—the man working with him who is a keen observer and knows ability when he sees it

Now it seems most worth while to recognize this latent power. There are so many fine things that are hard to put your finger on: intangible but splendid things that make people invaluable. If we can show appreciation of these things it is good But if we can also make a sort of record so that these same potentialities may be developed and used to the advantage of their possessors, the school, and the world outside the school, then something has been achieved

Therefore on the back of the cards is the blank which we have termed *Ability Indicator* The information for this blank may be furnished by almost anyone who is in a position to observe special ability in action,

as it were An *Ability Informatory Report* is supplied for noting such ability You observe a special ability in a fellow student You procure an *Ability Informatory Report* from the Student Activities Record Corps, fill it out and return it to the Record Corps and the entry will be recorded on the permanent card record. To be sure, the informatory report may have to be O K 'd by some member of the faculty or an officer in the student organization in which ability was observed, but you, yourself, are developing an exceptional quality when you are observing fine things in other people

Whether or not this ability indicator is to be of value will depend largely on the students. If no entries are made, there is, of course, no harm done If entries *are* made, vague possibilities may be developed into positive and *recognized* abilities. *You* are the people who see and know, really know, people in the school.

By you this special record will be made [1]

The work of recording these activities is done entirely by students who are organized into a Student Activities Record Corps This work in itself counts as a student activity and is supervised, as any other activity is, by a faculty sponsor. This system provides a means for searching out abilities, utilizing for this purpose not only the teachers but fellow students as well. It also makes a careful record of all activities engaged in for short or long periods. Such information constitutes most valuable data for guidance of every kind.

V. Outside School Activities

1. *Difficulty of Securing Reliable Information.*—Another source of useful information is found in the life of the student out of school. Obviously, if we wish to learn all we can about students we cannot neglect their home life, their outside play activities and work activities. The great difficulty is to devise some means by which we can get information that is useful and reliable. Parents can often give useful information about health, study habits, general traits, and special interests not known to the school. Home jobs, after-school jobs, and vacation jobs are often very helpful in revealing vocational likes and dislikes, abilities and interests. Frequent conferences with parents are mutually helpful in securing information Talks with employers often are productive in gaining important facts Possibly the

[1] Used by special permission of the author.

best method of utilizing such experiences is to have the student describe and analyze these experiences for himself. This can be done as regular theme work in English or as articles for the school paper or as projects in the class in vocational civics or occupations Doubtless, the methods used should vary with the situation but such outside school experiences should always be utilized as far as is possible.

QUESTIONS

1. What classroom conditions are essential for the discovery and development of initiative, independence, and persistence?

2 How will a recognition of the try-out function affect the organization of subject matter?

3. How can the traits and abilities discovered in student activities be utilized?

4. By what means can we discover the useful information concerning the activities of students outside the school?

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Chapter IX

THE USE OF TESTS IN STUDYING THE INDIVIDUAL

I The Purpose of Tests—To Get Objective Data

The one great need in all forms of guidance, as well as in other phases of education, is that of obtaining reliable information—*facts*, that can be tested and upon which we can act with confidence. Human nature is so complex and methods of analysis and measurement are as yet so inadequate that we are seldom entirely certain that the records we have are accurate or complete The past twenty-five years has witnessed a marked development in the effort to obtain data that are objective and fairly reliable We have not yet succeeded in removing all subjective factors from measurements nor have we devised entirely accurate tests and standards, but the significant thing is that much progress toward these ends has already been made and the way opened for further developments No guidance worker can, for a moment, afford to neglect this means for securing information or minimize its great value.

II. Tests and Scales of Achievement in School Subjects

The first group of tests to be considered will be the school achievement tests. These are tests devised to measure achievement in subjects studied in the school

1. *Tests by Teachers.*—Since the pioneer work of Thorndike in the first decade of the century, many experts have concentrated their efforts upon such tests. At present, there is no subject taught in the public school for which some kind of achievement test has not been devised Of course, all tests given by teachers are, or are intended to be, tests of achievement As already pointed out in Chap VI, the first difficulty with most of these tests given by teachers is that all sorts of things are included in the tests: skills, judgments, opinions, apprecia-

tions, as well as language ability, handwriting, and deportment. Some of these represent achievement in the subject and some do not; some can readily be measured, and some are extremely difficult to measure. The second difficulty is that there is no definite length of time given to the tests, nor are the questions graded according to difficulty, nor is the form of the various tests the same. This makes it impossible to compare the results of one test with those of another when given by the same teacher or by different teachers. The third difficulty grows out of the first two, that subjective opinions of teachers enter into the grades given on the tests

2. *Standard Achievement Tests*—Standard achievement tests attempt to correct these faults. First, they are so formed as to test only those things that can be more or less objectively tested and leave out, very largely, results that, while very desirable, are not at present capable of being tested directly; second, only the definite achievements in the subject studied are tested, as far as this is possible; third, each test is arranged so that the answers are always given in the same way, a definite and precise length of time is given for the test, the explanations and directions to be given are always the same, and definite, detailed directions for scoring the test are given. Such tests are the result of experimentation, and no test is sent out until very carefully revised, as the result of much trial and experimentation The results are standardized by collecting the answers from thousands of cases in different parts of the country. These results are tabulated and standards or norms for each grade or year of school are constructed. By means of these standards we can compare the achievements of John and Henry in the same grade and of both with the achievement of the class as a whole, or, if necessary, with the students in the same grade in some other school system.

Such standard tests are now a part of the regular equipment of our elementary schools and are gradually being worked out in various high-school subjects. In addition to these, we have, in some fields, scales by which it is possible to measure objectively degrees of quality and quantity of achievement. Among such scales now in use may be mentioned handwriting scales, English composition scales, drawing scales, and scales of literary appreciation.

3. *Limitations of Standardized Tests.*—The chief difficulties encountered in the use of such tests and scales are probably incident to their newness and incompleteness First, they do not measure all of the desirable outcomes in any subject For the most part they are much more effective in measuring the formal side of education than any other. No definite tests have as yet been devised for testing judgment, appreciation, power to organize, initiative, leadership, and character. Some tests attempt to do so indirectly and are undoubtedly very helpful, but they are acknowledged to be ineffective instruments as yet Again, when pupils are given standardized tests and their achievement scores in these are taken as a measure of the success of their work and also of the success of the teacher, the emphasis is placed upon the particular element that is tested, when, as is so often the case, this is the formal side, there is great danger that teachers will also place the main emphasis upon the formal side When this is done, the educative process is greatly weakened and impoverished.

4 *Values for Guidance*—It is hardly necessary to discuss the value of such tests and scales for guidance Any accurate measure by which we can compare the achievement of one person with that of others and with averages of groups and even with his own previous achievement will help in diagnosing his points of strength and weakness as well as in judging his abilities School progress can be gaged, remedial measures applied, and the entire situation improved.

When properly understood and intelligently used, these tests and scales are powerful factors in improvement because they enable us to diagnose difficulties. Often a careful analysis of such achievement tests not only reveals general weakness or strength, but also enables the teachers to find exactly where the weakness is An arithmetic test thus shows clearly whether the weakness of a particular student is in the fundamental operations, in decimals, or in analysis of the problem. Tests in physics have shown that failure was largely due (1) to language difficulties that prevented the student from understanding the problem, and (2) to lack of skill in the fundamental operations of arithmetic that made the arithmetical operations in physics difficult. The wise use of tests in French has shown whether the difficulties encountered were in vocabulary or in knowledge of grammatical

forms. As already pointed out in the discussion of teachers' marks in Chap. VI, the chief value in these standardized tests is that they enable us to get at the exact points of weakness or of strength; they give us definite facts..

III. General Intelligence Tests

1 *Name of the Test.*—Another kind of test has been found to have even greater value for guidance than the standard achievement tests in school subjects. Various names have been suggested for this type of test, but not one of them is entirely satisfactory. The most common names used are Intelligence Tests, General Intelligence Tests, and Mental Tests. The difficulty is that all tests, even of so-called physical traits, are to some extent mental tests, since physical movements originate and are controlled in the central nervous system. School subject tests must be not only mental tests in general, but tests of general intelligence as well The difficulty is aggravated by the lack of agreement among experts regarding exactly what these tests measure.

2. *Confusion of Terminology.*—Some believe that they are tests of inborn capacity, and thus are accurate measures of what an individual may achieve. Others believe that they are tests of what a person has already learned, and not accurate measures of inborn capacity. The question is also complicated by the meaning assigned to the terms "intelligence" and "intellect." Lightner Witmer looks upon "intelligence" as native capacity, what we have by nature, and "intellect" as native capacity acted upon by environment—what we are able to do at any time; our working ability to solve problems is intellect, and this is the product of education, environment, and "intelligence." Lester F. Ward[1] uses the terms in the opposite way. To him "intelligence" is "intellect plus knowledge" or "intellect plus the product of its operation " Thus, intellect is inborn capacity and intelligence the product of native capacity acted upon by environment. No matter what are the merits that one definition may have over the other, it is clear that the statement by Ward represents more nearly the common use of the term and will be accepted in this discussion.

[1] Ward, Lester F., The Psychic Factors of Civilization, Boston. Ginn and Company, 1897, pp 229, 230.

3. *Difficulty of Testing Native Capacity*—Everyone admits that we cannot, with our present testing tools, measure native capacity directly. Native capacity, or "intellect," is a term useful as an abstraction, but impossible to separate from the total product By its very nature, it must represent a certain combination of potential abilities or qualities found in the fertilized ovum Even in the period of growth before birth, many things may happen to affect the fœtus unfavorably. Poor nutrition, disease, lack of exercise, and accidents may profoundly affect native capacity long before it is possible to measure or test it Few tests of any kind are possible until several months after birth By this time environmental factors may have had a very great effect upon "native capacity" We are forced, then, to adopt indirect methods of measuring this innate "intellect" or capacity.

4. *Tests of Native Capacity*—On this point, practically everyone is agreed that any test given is, at least, partly a test of innate capacity. If we could be sure that other elements were equalized, we could measure, at least roughly, innate qualities. For example, if we could so arrange the life and environment of two boys that all factors acting upon them—parents, teachers, playmates, food, clothing—are exactly the same, that the illnesses one has, the other also has, and if in every way we could make the conditions affecting one the same as those affecting the other, we could be fairly sure that the differences noted at any given time would be due largely, if not entirely, to heredity. Thus we could, to a degree, measure inborn capacity The differences in points of view now apparent among biologists, sociologists, and psychologists are not regarding the fundamenta, fact of differences in native capacity, nor regarding the importance of environmental factors as influencing development, but in the relative importance of heredity, on the one hand, and environment, on the other, in affecting the growth and development of individuals

5. *Uncertainty regarding the Extent of Influence of Heredity*—Terman stresses the influence of heredity. Watson, on the other hand, stresses environmental facts. He even goes so far as to say:

> Give me a dozen healthy infants, well formed, and my own specified world to bring them up in, and I'll guarantee to take any one at random and train him to become any type of specialist I might select—doctor,

lawyer, artist, merchant, chief, and, yes, even beggar-man and thief—regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors [1]

Recent investigations tend to show that environmental factors are exceedingly important in what we call "intelligence." Observations on children of the same family and even on twins when separated at an early age and placed in different homes have shown marked differences in I.Q. as measured by standard intelligence tests. This shows either (1) that the tests used cannot separate out native capacity and measure it, or (2) that native capacity is definitely subject to modification by environment Until further investigations on a more extensive scale are made, we must reserve judgment on the general question. From our present knowledge, however, it seems probable that given two children two years old of exactly the same "native capacity" their "intelligence" may be made to vary greatly by differences in food, in sleep, in general care, in home conditions, in schooling.

6 *Native Capacity as a Constantly Accelerating Force.*—On the other hand, we may also safely infer that, if general environmental conditions are at all constant, native capacity acts as a constantly accelerating force in determining the "intelligence" of individuals at any given time. As has previously been pointed out, if a boy starts with very superior ability in Latin, he will learn more quickly than one with less ability, and the difference in actual Latin achievement will constantly increase He gains in knowledge of Latin, not only because he starts out more quickly and thus gains the fundamentals upon which to work, but also because he has greater capacity to learn Latin. As a rule, when the differences in achievement in quantity and quality over a given period are very great, we may safely infer significant differences in native capacity. More important than this, the investigations of Freeman on the results of varying environments on brothers and sisters have shown that environmental factors were much more powerful in the case of children who were under five years of age than they were after this time. There seems to be a period of "plasticity" during which environmental factors have greater effect than they do later. It seems clear

[1] WATSON, JOHN B, Behaviorism, New York: W W. Norton and Company, Inc., 1925, p 82. (*Used by special permission of the publisher*)

that among children of school age, tests of general intelligence have great value in predicting future accomplishments

Turning now to actual investigations into the relationship between the results of these tests and school progress, we find quite a wealth of material.

7. *Relationship between Intelligence Scores and School Expectancy* —Proctor made a careful study of 131 cases of high-school students and followed them up over a period of six years Some of the results of this study are given in Table XXIII

TABLE XXIII —COMPARATIVE STUDY OF 131 HIGH-SCHOOL STUDENTS[1]

	Number	Range I Q	Median I Q	Upper quartile	Lowest quartile	Median high-school mark	Range in average mark
I Students who did not complete high school	30	116–79	94	116–100	88–70	C	B to D
II *Students who completed high school but who did not continue their schooling*	34	128–89	100	128–110	97–89	B –	A – to D +
III Students who completed high school and continued their schooling	67	142–93	118	142–125	107–93	B	A to C

[1] PROCTOR, W M, The Use of Psychological Tests in the Educational and Vocational Guidance of High School Pupils, *Journal of Educational Research Monographs*, No 1, October, 1923, Bloomington, Ill, Public School Publishing Company, Rev Ed, 1923 Constructed from material in Chap IV (*Used by special permission of the publishers*)

This shows some striking differences between the three groups. The highest I.Q. of Group I, those who did not complete high school, was lower than the median of Group III, those who went to college Roughly the higher half of Group I corresponds in I.Q. to the lower half of Group III On the other hand, we may say that the upper half of Group I have, so far as I Q is concerned, as good a chance to succeed in college as the lower half of Group III These facts are somewhat more strikingly brought out in Tables XXIV and XXV, and in Figs 13 and 14

Figure 13 shows that there are no striking differences in I.Q for Groups I and II; a somewhat larger percentage of Group I have low I Q. The greatest difference is seen in Group III—those who have gone to college. Here the difference is marked.

There is clearly a common ground, however, for the three groups, and this is between an I.Q. of 90 and one of 120. Group I has 70 per cent between this range, Group II has 91 per cent, and Group III has 46.2 per cent. We must admit, then, that within this middle group, the I Q. alone does not provide any completely reliable criterion for determining length of stay in school. The upper range, 120 to 150, or better, 130 to 158, does reveal significant differences, and the lower range, 70 to 90, also shows a
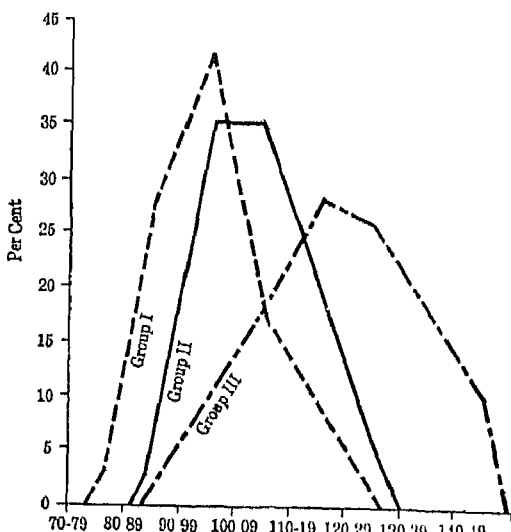
FIG 13 —Intelligence scores of three groups of high-school students

clear relationship. Feingold, in a study of the students in the Hartford High School[1] found the distribution into intelligence groups to be as follows:

TABLE XXIV —PERCENTAGE OF STUDENTS IN EACH MENTAL GROUP IN SIX CLASSES AT THE BEGINNING OF THE TERM[1]

Class	L9	U9	L10	U10	L11	U11
Superior (I Q 110 –)	9 4	11 0	12.0	13 5	17 0	18.8
Average (I Q 95–109)	65 0	67 5	71.7	71 2	70 5	69.0
Inferior (I Q. 94 and below)	25.6	21.4	16.3	15 3	12.5	12 2

L9 means lower ninth grade, U9 means upper ninth grade, etc

[1] FEINGOLD, GUSTAVE A., Intelligence and Persistency in High School Attendance, *School and Society*, 18: 443–450, Oct. 13, 1923.

This table shows that 9.4 per cent of the pupils in the lower ninth grade are superior, 65 per cent are average, and 25 6 per cent are inferior, while in the upper half of the eleventh grade 18 8 per cent are superior, 69 per cent average, and 12 2 per cent are inferior. Feingold estimates that if the class were traced through the three years the percentages of each intelligence group remaining in school would be as follows·

TABLE XXV —PERCENTAGE OF PUPILS REMAINING AT THE BEGINNING OF EACH TERM[1]

Class	L9	U9	L10	U10	L11	U11
Superior	100 0	100 0	89 4	86 2	81 4	80 0
Average	100 0	88 3	77 3	65 8	48 8	42 5
Inferior	100 0	71 0	44 6	36 0	22 1	19 2
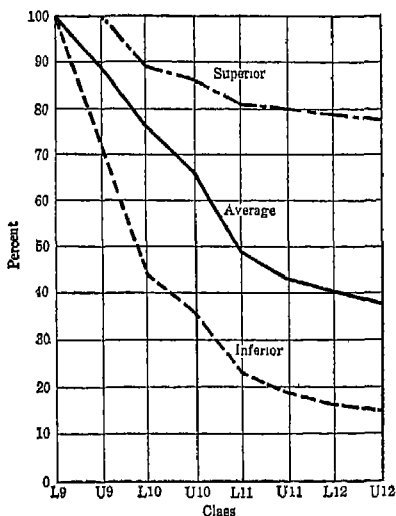
FIG 14 —Percentage of students remaining at the beginning of each term

The situation is brought out more clearly by Fig 14. It is described by Feingold as follows:[1]

Confining our investigation to the Hartford High School, wherein the system of semiannual promotion prevails, we observe that of the

[1] FEINGOLD, GUSTAVE A., Intelligence and Persistency in High School Attendance, *School and Society*, 18· 445, Oct 13, 1923.

superior pupils, 10.6 per cent will have dropped out by the beginning of the sophomore year An additional 8 per cent will have dropped out by the beginning of the junior year, and another 1.4 per cent will have dropped out by the beginning of the senior year Thus, by the end of three years, some 20 per cent will have left school, while fully 80 per cent will graduate at the end of the four years, since figures show that very few, who become seniors, leave without graduating. On the other hand, among the lowest mental group, full 55 4 per cent will have dropped out by the end of the first year, another 22.5 per cent will have dropped out by the end of the second year and almost a total of 81 per cent will have dropped out by the end of the third year. In other words, only 19 per cent of them will be left in the high school at the end of three years, or long enough to enter the senior class.

Practically all studies of children who have left school show that those who rank in the lowest intelligence group withdraw in much larger proportion than those in the superior and the average groups.

We thus see that intelligence tests do have a high predictive value in indicating persistency or retention in school. We should note clearly, however (1) that this does not account for all the withdrawals, for more then 10 per cent of the superior group and over half of the average group left school; (2) that some at least of the group marked inferior by the test remained in school.

TABLE XXVI —COMPARISON OF THREE GROUPS OF HIGH SCHOOL STUDENTS ACCORDING TO I.Q.[1]

Intelligence quotients	Group I		Group II		Group III	
	Number	Percentage	Number	Percentage	Number	Percentage
140–149			.		1	2
130–139	.		..		11	16.4
120–129			2	6	17	25 4
110–119	3	10	7	21	19	28.2
100–109	5	17	12	35	12	18
90– 99	13	43	12	35	7	10
80– 89	8	27	1	3		
70– 79	1	3				

[1] PROCTOR, W M, Psychological Tests and Guidance of High School Pupils, Bloomington, Ill Public School Publishing Company, Rev. Ed., 1923 adapted.

8. *Relationship between School Marks and School Expectancy.*—Another interesting comparison is that between the scholastic grades given in school and school expectancy. Here again the
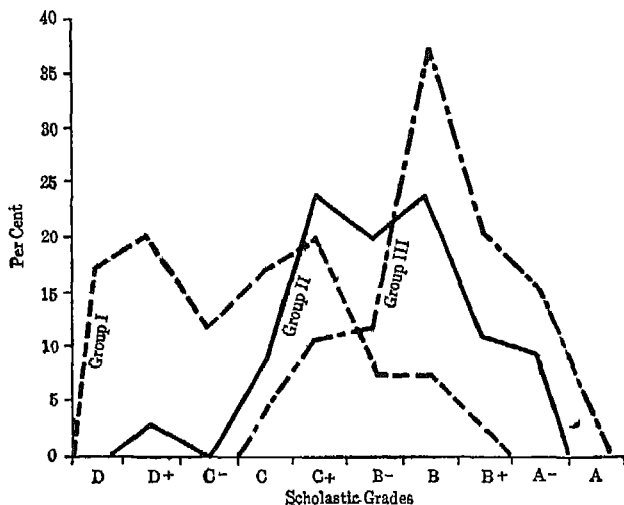
FIG 15.—Scholastic grades of three groups of high-school students

studies made by Proctor are significant Table XXVII and Fig 15 show the general relationship found:

TABLE XXVII —COMPARISON OF THREE GROUPS OF HIGH-SCHOOL STUDENTS ACCORDING TO SCHOLASTIC MARKS IN HIGH SCHOOL[1]

Marks	Group I		Group II		Group III	
	Number	Percentage	Number	Percentage	Number	Percentage
A				.	2	3
A−		.	3	9	10	15
B+	..	.	4	11	13	20
B	2	7	8	24	25	37
B−	2	7	7	20	9	13 3
C+	6	20	8	24	7	10 3
C	5	17	3	9	1	1 4
C−	4	12				
D+	6	20	1	3		
D	5	17				

[1] PROCTOR, W. M, *op cit*, adapted.

We can also see that there is by no means a perfect similarity between I Q. and marks in high school. Here the differences between Group II and Group III are not as great as might be anticipated. The median mark for the two groups is almost the same, and the range is very similar. It is apparent that the students in Group II, as a whole, are working more nearly up to their capacity than are those of Group III, or, stating it in another way, that the teachers are not making the bright group work as hard as they should. We do see some significant difference in the total per cent who have attained marks above *C*, taking this as an average or median mark. This is brought out more clearly when we take the percentage of each group that is above and below the median. Group II has 88 per cent above *C* and Group III has 98.6 per cent above. More significant still, the percentage of Group III who attain a mark of *B*− or above is 88 3, while that in Group II is only 68.

Much more significant differences are found in Group I, who are far below either of the other groups in scholastic standing. In this group, 49 per cent of the marks in the group are *C*− or below, that is, below average, and none is above *B*. The graph shows clearly that the common ground lies between the marks of *C* and *B*. Group I has 51 per cent within this range and none above; Group II has 77 per cent, and Group III has 62 per cent above and none below.

9. *Intelligence Scores and College Marks*—Many studies have been made of the relationship between scores in intelligence tests and college scholastic standing. Brown University has for years given tests to incoming freshmen and has used the rating as a basis for classification. Tables XXVIII and XXIX will serve to show some interesting facts regarding the relationship between intelligence rating and college success.[1]

These tables show that more unsatisfactory cases are reported among those lower in intelligence rating than among those higher; and that more cases of students doing better than average work are reported among those higher in intelligence than among those lower. It should be noted again that the resemblance is

[1] TYSON, GEORGE R., Results of Intelligence Examinations Held in the Colleges and High Schools, *University of Pennsylvania Bulletin*, Vol XXI, No. 1, Seventh Annual Schoolmen's Week Proceedings, Philadelphia. University of Pennsylvania, 1920, pp. 262–270

TABLE XXVIII.—RELATION OF SCORES TO ACADEMIC STANDING—BROWN UNIVERSITY

Eighty Students Reported as Unsatisfactory in School Work

Rating in Psychological Tests	Number Reported as Unsatisfactory
Poor or very poor	53
Average	14
Good or very good	13

TABLE XXIX.—RELATION OF SCORES TO ACADEMIC STANDING—BROWN UNIVERSITY

Thirty-four Students Reported as Doing Better than Average Work

Rating in Psychological Tests	Number Reported as Better than Average
Superior	5
Very good	19
Good	7
Average	2
Poor	1

not complete and great care must be taken not to interpret the results too generally Figure 16, taken from the same study, throws additional light upon the same question [1]

The diagram is a graphic representation of the Pearson coefficient of correlation, 0 52, that was obtained In the upper half of the diagram we have regular steps of ten points interval, showing the intelligence scores Below each step is recorded the number of persons receiving the score of that step In the lower half of the diagram is found the average of the school grades received by the persons having the intelligence score above. Thus the diagram reads, from left to right, one person received an intelligence score of between 190 and 199 and a school mark of 97 Three persons received intelligence scores of between 180 and 189, and their school grades averaged 91, and so on across the page.

Here again we see that there is a real relationship between marks obtained and intelligence scores The highest woman in intelligence score made the highest scholastic mark, and the lowest in intelligence received the lowest marks. Between these extremes great variations occur.

[1] TYSON, GEORGE R, Results of Intelligence Examinations Held in Colleges and High Schools, *University of Pennsylvania Bulletin*, Vol XXI, No 1, Seventh Annual Schoolmen's Week Proceedings, University of Pennsylvania, 1920, pp 266, 267.

The differences noted in this study are seen in practically all investigations of the kind Clear differences are shown in ability and accomplishment between the very low I.Q and the very high I.Q. We can be quite certain that those who are very low will not succeed in high school and should not think of going on to college Those of high I.Q can, if they will, succeed in high school and, as far as intellectual ability is concerned,
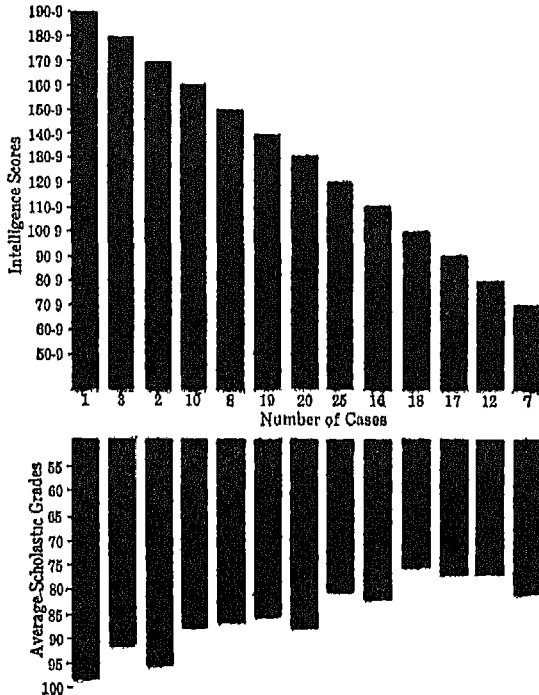
FIG. 16.—Comparison of scores in Alpha test with college marks of 159 women at Southern Methodist University.

could profit by further study in some school beyond high school When we approach the mid-points, those who are near average ability, the situation is not so clear. Persons of average I.Q. do succeed in college and persons of above average I.Q do fail in college. Within this range other factors than those tested by these tests are determinative. Among these factors are health, general attitude and interest, freedom from worry, and certain of the character traits mentioned in Chap X.

10. *Prediction of Educational Success* —One of the most valuable studies in the prediction of school success is the ten-year follow-up study by Thorndike.[1] This is the

. . first comprehensive study in the United States to learn what happens in later years to children who are given vocational guidance Professor Thorndike and his assistants obtained in 1922 the school records of 2,225 children then about fourteen years old, gave them psychological and vocational tests, and followed the educational and industrial careers of 1,807 of them to 1932 to determine the value of each fact of school and test records for vocational prediction or guidance.

The correlations of the intelligence-test scores with grade reached at leaving school, school progress after the time of the tests, scholarship after the time of the tests, and a composite of these, called educational success, is uniformly high.

These correlations reveal that the score in a test of an hour or less which can be given to a hundred children at once, predicts future educational success better than the progress record of approximately eight years in school and nearly as well as the opinions of past teachers concerning conduct or ability.[2]

This is further confirmation of the conclusions of earlier studies and should make guidance workers more confident of the value of the tests for prediction of success of groups of students.

11. *Intelligence Scores and Occupational Success* —Intelligence tests have also frequently been used to predict occupational capacity. Practically all of these attempts are based upon the results of the Army Alpha Tests given to our soldiers in the World War Each enlisted man filled out a card stating his occupation; he was also given the Army Alpha Test (or the Beta Test, if he was unable to read English with a fair degree of efficiency). From these data were computed the relative intelligence levels of the various occupations. The relationship between the Army Alpha scores and the various occupations is shown in Fig 17.

This figure is an adaptation of Fig. 16 in Army Mental Tests The base is the actual Army Alpha scores instead of the letter grades. The equivalent letter grades are given at the bottom,

[1] THORNDIKE, E L, and others, Prediction of Vocational Success, New York The Commonwealth Fund, 1934.

[2] *Ibid*, p 48
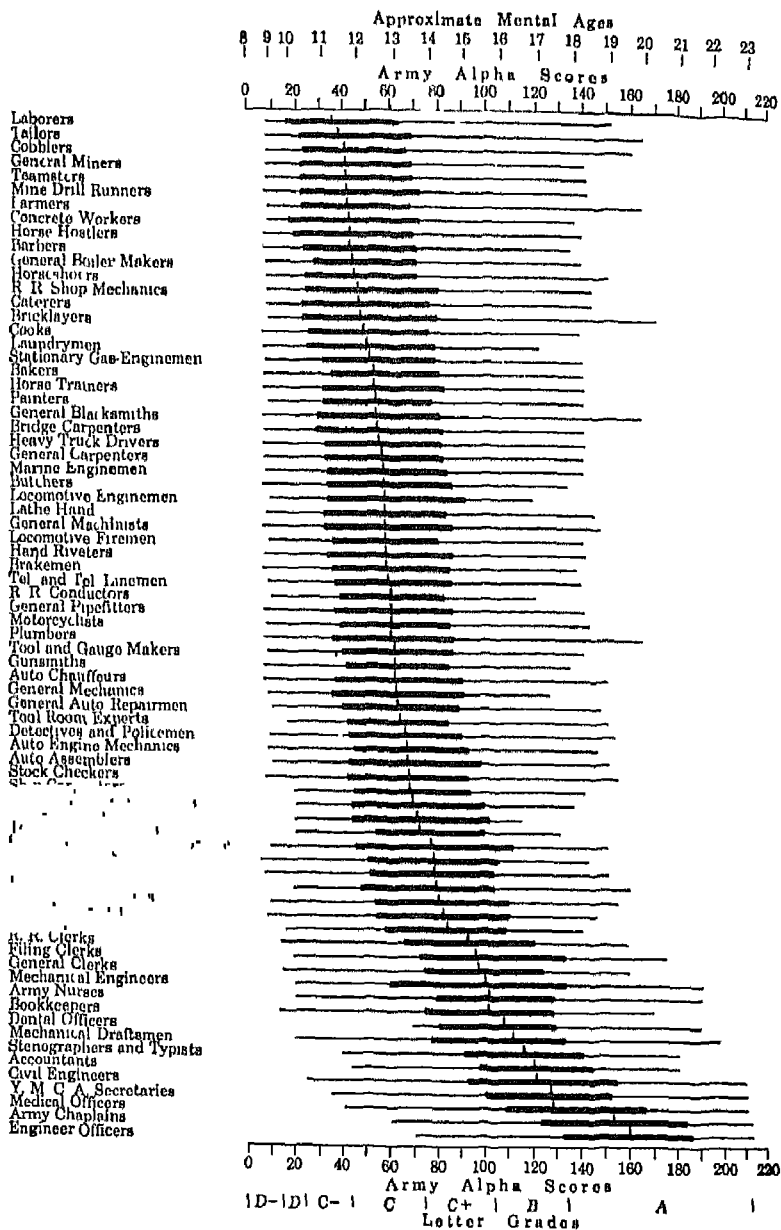
FIG 17.—Occupational intelligence standards.

and the approximate mental ages[1] at the top Each line shows the median, the middle 50 per cent, and the approximate total range of the occupation listed. The total range has been calculated from Table 378 of the Memoirs of the National Academy of Sciences This gives for each occupation the percentages of men receiving the various letter grades from D− to A. We thus have fixed the range of letter grades; the Alpha scores within the letter grades at each end of the range have been roughly calculated. In any case, the error is not great, and the total ranges as given may be taken as representing accurately enough the actual range.

The figure shows clearly the great difference between the medians of the laborer and the engineer officer While the differences in the medians of the occupations as arranged is very little in many cases, there is clearly shown a steady progression. On the whole, the relative order of the occupations agrees with our *a priori* judgment of the intelligence required in each.

How can these be used for guidance purposes? At once several limitations suggest themselves First, we cannot be sure that the occupations named on the cards of soldiers were, in all cases, their real occupations Numerous cases were found where the soldier reported some other occupation than the one in which he had been engaged; this was often done because the man wanted to learn another occupation. In the second place, we have few data that will enable us to know *how successful* the man was in his occupation.

Some were novices and had had no contact with the occupation; some were apprentices, others journeymen, and others experts A limited study[2] was made of certain occupations in which the degree of expertness of the worker was known. In this study, the median scores of experts were usually above those of journeymen, and those of journeymen above those of apprentices But medians of groups are not satisfactory bases for judging individuals It is assumed by Fryer and others that the middle 50 per

[1] These approximations are taken from Manual of Instructions for use with Army Alpha Intelligence Tests V, VI, VII, VIII, IX in public schools, Bureau of Educational Measurements, Kansas State Teachers College, Emporia, Kan , Seventh Ed , 1930, p 18

[2] YERKES, ROBERT M , Psychological Examining in the United States Army, *Memoirs* of the National Academy of Sciences, Vol XV, 826–827. Washington· Government Printing Office, 1921

cent of scores in each occupation can be taken to represent the range within which success in that occupation may be predicted. When this range is taken, the relative place of the various occupations is not so clear. The upper quartile of the lowest occupation equals or exceeds the median of forty-three other occupations.
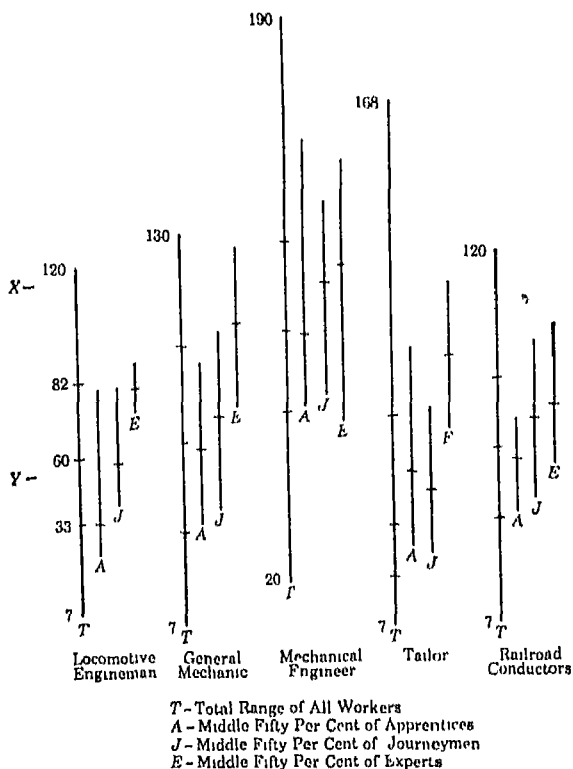
Fig. 18.—Comparative scores in Army Alpha of apprentices, journeymen, and experts.

The median score of laborers falls with the 50 percentile range of over half the occupations listed. It is, however, when we take the total range that the greater overlapping is seen. The assumption that the success range is the middle 50 per cent is only an assumption at best and cannot in the nature of the case be always true. A glance at Fig. 17 will show that the upper ranges of the lower occupations extend far up into the middle 50 per cent of the highest occupations and that the lower ranges of all

except two occupations extend far down into the lower quartile of the lowest. Nor are we helped very much by the data showing differences between apprentices, journeymen, and experts. The same overlapping is seen. This may be seen in Fig 18, which gives for five occupations the medians and the middle 50 percentile range For purposes of comparison, the total range, the median, and the middle 50 per cent are also given

The practical difficulty in prognosis may be clearly shown by a comparison of the five occupations in Fig. 18. Suppose that one boy, *X*, has a score of 115 and another boy, *Y*, a score of 50. What occupation is indicated for each? In the first place, while the lines show in a general way the range of scores made by apprentices, journeymen, and experts, we have no data that would indicate whether experts and journeymen who made low scores were more or less successful than those who made high scores. We might find the most successful expert enginemen all above the median or all below. It is possible that "intelligence," as measured by the Alpha scores, is a handicap in certain occupations This is more than a conjecture, it has been demonstrated. Again, granting that the scores do show occupational capacity, what one of the five occupations should boy *X* choose? Should he choose the vocation of mechanical engineer in which he would rank somewhat above the median or one of the other four in which he would rank near the top? Should boy *Y* choose to be a railroad conductor in which he would rank near the median, or might he succeed as a mechanical engineer? Many other factors than such scores would need to be considered before a decision could be made intelligently.

We cannot, then, take these results at their face value and use them as the only or the determining factors in occupational choice. They are valuable, but only if used in connection with other supporting and supplementary data Again, we see, as in other cases where tests are used, that the scores toward either extreme are much more significant than are those toward the average We may be fairly sure that if a boy attains an intelligence score much below the median of a certain occupation, the probability of his success in that occupation would be remote and he should be led to choose another unless he shows clearly other outstanding qualifications. The boy who makes a high intelligence score should, possibly, consider first those occupations

that rank high in intelligence scores rather than those ranking low. In the light of Thorndike's findings, even this guarded statement may be too strong. In the ten-year follow-up of individuals, he found the prediction of vocational careers and vocational success based upon intelligence tests little better than a chance guess [1]

Intelligence scores are undoubtedly much more valuable as indicating desirable occupational choices, at certain levels, than are the data regarding intelligence levels of occupations. This is true because these scores have a high value in predicting success *in school*, and school success is a necessary element in the preparation for all higher occupations If an occupation requires a certain amount of school work as a prerequisite to entrance or to success and if, as we have seen, scores made in intelligence tests have real predictive value for school success, these scores are very useful in indicating occupational choice even though they do this indirectly. For example, suppose a boy wants to become a civil engineer. Ordinarily, the preparation for such a profession demands successful competition of high school and college or school of engineering, with a large amount of work in mathematics To do the work in school or college requires an intelligence indicated by a score of 100 to 120 in Army Alpha. Hence, even though he might become a successful engineer if he could receive the necessary training, it would be useless for him to plan such a career because he would not get through school. In most of the cases, the value of intelligence scores is found on the negative side They indicate those who should *not* attempt to enter a given occupation fairly well but do not indicate the particular occupation that one should enter.[2]

IV. Aptitude Tests

1. *Basic Assumptions* —Closely related to the tests of general intelligence already described and to the "ability," or "proficiency," tests to be described later are tests designed particularly to discover aptitude—the capacity for the development of ability or skill. It is often impossible to separate entirely the three types of test. The chief difference lies in the relative

[1] Thorndike, E L, *op cit*, pp 59, 60

[2] A method by which mental ages or scores in intelligence tests may be used as a help in occupational choices is described on p 155.

emphasis upon one or another phase. Nearly all of these tests are based upon the assumption that there are certain innate capacities that underlie and condition abilities and skills in any line of activity; when these capacities are present, success is likely to result from training, and, when they are absent, failure is inevitable. It is assumed, for example, that musical memory is an innate capacity or that some innate capacity determines the amount of musical memory any person may attain. If, then, one lacks this capacity or has it to a very slight extent, no amount of training will enable him to become an accomplished musician. Again, promptness of decision is considered an essential to success as an executive. This, we are told, is an innate capacity. If one has this capacity to a marked degree, it is probable that he would be successful as an executive The task of the investigator is, then, to find whether these determining capacities are present or not and to discover this as early in the life of each person as possible. This offers a fascinating field for investigation. The intelligence tests already described are based in large measure upon this same assumption—that what we call intelligence (or whatever is tested by these tests) is a necessary element in school success and in success in various occupations.

Some advocates of the use of these tests make no claim that these tests test any underlying innate capacity or that there is any such capacity. They are interested only in the degree to which tests predict what individuals do or can do If the scores on these tests actually predict what the individual does or can do, it does not matter whether the tests test innate capacity or something merely closely related to the ability that is developed later They are tests designed to predict this ability.

Aptitude tests cannot, of course, distinguish clearly between innate capacity and developed ability The score that one makes on any test is dependent upon both nature and nurture or environment. When given to individuals who have had no training directly or indirectly in the things to be tested, they more nearly represent aptitude Trade and other proficiency tests are also, in a measure, aptitude tests, but here training precedes such tests. Given the same amount of training, a trade test may distinguish clearly differences in aptitude between individuals. Trade tests given before and after training will also reveal differences in aptitude between individuals.

2 *Kinds of Capacity Tested*—Among the "capacities" or "aptitudes" that are suggested as important to test are (1) musical aptitude; (2) manipulative or mechanical aptitude; (3) attention and will, including span of attention, fluctuation of attention, concentration of attention, promptness of decision and action; (4) emotional traits, such as nature and degree of emotional expression, "temperament" and dominant moods and sentiments, interests, antipathies, introversion-extroversion, etc.; (5) scholastic aptitudes, both general and specific, (6) aptitudes for various occupations such as aviator, compositor, motorman, salesman, stenographer, and many others.

3. *Types of Aptitude Test.*—It would be difficult even to list all of the different forms of aptitude test that have been constructed, many of which are now in use. General scholastic aptitude tests are now used for predicting success in high school and college These are fairly successful and have high predictive value There are also special aptitude tests for nearly every subject in high school; these are valuable but do not yet have predictive value so high as do the general tests.

Seashore has devised tests designed to discover certain factors that are considered essential to the development of musical proficiency; among them are (1) musical sensitivity, (2) musical action, (3) musical memory, (4) musical intellect, and (5) musical feeling. Stenquist and others developed tests to detect general mechanical aptitude. They presuppose no mechanical experience.

Downey constructed a series of tests for determining the temperamental traits of an individual through a series of motor reactions. Scores on the tests may be used to judge an individual's innate force, self-confidence, adaptability, power of restraint, patience in detailed work, and other qualities. Watson has a test for fair-mindedness in certain religious and economic issues indicating the trend and amount of prejudice exhibited in forming judgments Pressey and Brotemarkle have constructed tests designed to discover emotional reactions to certain situations, and Viteles has developed tests to distinguish kinds of attention and to indicate promptness of action.

Some of the most interesting and useful aptitude tests are those devised to test aptitudes for various occupations, or perhaps it would be more nearly correct to say that their purpose is to

predict success or failure in occupations. Such tests have been devised for many different occupations Among the most succesful are those for stenographers, telegraphers, aviators, waitresses, sewing-machine operators, engine lathe operators, automobile drivers, comptometer operators, and motormen.

There are also various tests devised to test what might be called fundamental character traits that are thought to be necessary for success in various types of occupation Mental alertness, introversion-extroversion, social attitudes, and many other traits have been tested

4 *Comparative Inefficiency of Tests.*—None of these tests of aptitude has shown a correlation with the actual development of the trait sufficiently high to warrant its use as the sole means of determining aptitude, but they are probably quite helpful when administered and interpreted by experts; in most cases, they are not safe instruments for the novice.

Thorndike, in the study referred to on page 151, found that the correlation between aptitude tests given in school and the occupational choice and occupational success of the same individuals ten years later was so low as to be meaningless for prediction The claims made for these tests by many of those who have constructed them seem, therefore, not to be warranted by the facts. There are no tests yet devised that can be relied upon to predict vocational success for young people in school General intelligence tests are, apparently, just as valuable as the aptitude tests now in use. School success can, however, be predicted with a high degree of certainty.

5 *Validity of Assumption.*—It is not entirely clear that the fundamental assumption upon which they are based is valid. This assumption is that there are certain qualities that are common in all situations and that manifest themselves in the same way regardless of varying circumstances and that these qualities are inborn Stenquist assumes that the mechanical reactions to the situations in his test will reveal the way in which the individual will react to all mechanical situations. Downey assumes that the self-restraint shown in the situations devised by the test is symptomatic of the self-restraint of the individual in situations that are largely or totally different The same may be said of Watson, or Pressey, and of Brotemarkle Viteles assumes that the person who, in his laboratory experiments, shows a certain

span of attention or manifests fluctuation of attention will show the same quality or kind of attention as a motorman or an aviator or a machine operator when on the job. These assumptions are basic, and upon their truth or falsity depends the reliability of the tests. Thus far, none of these assumptions has been proved. They may or may not be true. If it can be demonstrated that such common innate traits actually do exist, our problem of training, and of education in general, would be greatly facilitated. We would first find by tests whether a certain "general" trait, such as self-confidence, was present in a given individual, after this, all we would need to do would be to train this trait, and we could secure a decided increase in self-confidence wherever and whenever the situation arose in which self-confidence could be manifested. The absence of the trait would indicate that we should not spend time and effort in the attempt to develop that which does not exist. The difficulty is in determining the truth or falsity of the fundamental assumption. Practically all the experimentation so far carried on in connection with the problem of spread of training from one field to another would lead us to doubt the accuracy of the assumption. It seems safe to assume that traits, as such, do not have separate existence but are merely relationships between situations and responses that self-confidence and power of restraint are merely attitudes a given person takes in response to certain rather specific situations; that these situations are complex and that the same elements are not present at two different times. Consequently a person may show unusual self-restraint when in the presence of a superior officer, but let down the bars completely in the presence of inferiors or equals. It may be that further analysis and experimentation will change our point of view and reveal the presence of some common underlying traits. Until such time, we should be extremely careful not to place complete confidence in the results of such tests. Human life is far too complex to warrant us in believing that common and invariable elements may readily be separated out and used as a basis for training

V. Trade Tests and Tests of Mechanical Skill

1. *Distinction between Purposes of Trade Tests and Aptitude Tests*—So far in this chapter we have been dealing with tests

that would help us find whether an individual had or had not the general qualities and characteristics that would enable him to be successful in certain occupations provided he secured the proper training for them That is, we were trying to find whether, on the basis of general and specific qualities or aptitudes, it would be worth while for him to *begin preparation* for the occupation It is also important for us to know whether, at any given time, the individual has the skills, the special abilities, and the techniques that will make his success probable in a given occupation. These two functions of prediction are not opposed, but supplemental The former helps in the choice of *training for an occupation,* the latter helps us to determine whether the individual *is ready for the job.* Many of these tests devised to test skills, techniques, and special abilities are also useful, to some extent, in indicating the further training that is desirable and possible, and so can be used several years before the occupation is to be entered upon, but their greater usefulness is in determining whether the individual is now ready for the job.

2. *Limitations of Tests of Skill.*—The last ten years has seen a large number of such tests devised, many of which are very helpful. The chief difficulties in devising such tests are (1) We do not know enough about the specific abilities, skills, techniques, and attitudes that are necessary for success in a given occupation Job analysis has been of very great assistance, but it has not yet developed a method of analysis that is completely successful. Until we know what to test, we cannot, of course, develop adequate tests (2) We do not know the various combinations of qualities and characteristics that may make up a complex "aptitude" or "ability." We are now quite sure that success may come from any one of several different combinations of specific abilities or characteristics. (3) We do not yet have tests that are completely effective in disclosing skills, abilities, and specific or general characteristics. (4) The conditions under which such tests are usually given are not "trade" conditions, that is, they are usually given in schools where the surroundings are not exact duplicates of the situations in the job on which the skills will be used In some cases this is not vital, but in others the difference in the situations is so great that skill may be manifested when the test is given, but may not be shown under the different circumstances of the job.

It is not the function of this discussion to describe in detail the various tests devised and to show their exact application to the problem of guidance. These tests are, for the most part, quite technical and should be administered and analyzed by experts. A general description of various types of such tests is sufficient for our present purpose. For a more intensive treatment of these tests the reader is referred to the list of reference books at the close of the chapter.

3 *Trade Tests.*—Trade tests were first used extensively in the army. A modern army is not simply a collection of fighters; it is made up of skilled workmen in almost every kind of occupation—engineers, carpenters, stone masons, plumbers, horseshoers, auto-repair men, machinists, mechanics, cooks, barbers, and a host of other diverse occupations. In an army composed of thousands of men hastily brought together from all parts of the country and from all sorts of conditions, it was absolutely necessary to select skilled workers in all these occupations. Time could not be wasted in preparing men for jobs; men who already had the necessary skills must be selected quickly It was out of such conditions that trade tests developed. They were designed to select out as quickly as possible men who had the qualifications necessary for immediate success in various jobs. They consisted, in general, of information tests and performance tests. Information tests were designed to find what the individual knew. They were usually of two kinds, (1) oral or verbal tests, and (2) picture tests. In the former, names of machines and parts of machines, of tools, processes, etc., were given and questions asked concerning each. In the latter, pictures of these machines, tools, etc., were presented and questions were asked designed to reveal the knowledge of the individual or his acquaintance with the tool or machine. The performance tests tested the individual's ability to do the job itself. Each type of performance test was so arranged as to distinguish between the novice, the apprentice, the journeyman, and the master workman Tests of this kind have been developed in many occupations Among them are those of the stenographer, typist, tool maker, gunsmith, pattern maker, carpenter, plumber, lathe operator, sheet-metal worker, machine operator, clerk, motorman, printer, and many others. All of these tests are by no means entirely successful, but all are helpful and give promise of further development to a point where they

can be largely relied upon for the selection of applicants, when the important thing is to select those who now have the skill requisite for success in the job applied for. It should be remembered that most of these tests recognize that the ability to perform the activities of the job is a complex ability and involves many specific abilities. Consequently, most of the tests are batteries of more or less simple tests and so are designed to test various abilities The score is a composite score made up of the sum of the scores of the component tests.

VI. Summary

In spite of the fact that our present testing program must be considered as incomplete and entirely inadequate to meet our needs, it is the most encouraging part of the entire educational situation We see the need of actual objective measurement of achievement, of abilities, of aptitudes, and are embarked upon the development of such a program. The methods used are scientific, and for the most part there is frank recognition of the limitations of the tests so far constructed With all their limitations they are invaluable instruments in guidance. No guidance worker can afford to neglect them.

QUESTIONS

1 What do "intelligence tests" test?
2 How far can we depend upon them for prediction?
3 What is the evidence for and against "general" traits or capacities?
4 What difference in the training of students would be made by the acceptance of one or the other of these two points of view?
5 What tests have been devised to test actual abilities and skills?
6 How effective are they?

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Chapter X

ESTIMATES OF PERSONALITY TRAITS AND SELF-ANALYSIS AS METHODS OF STUDYING THE INDIVIDUAL

I Estimates of Personality Traits

In Chap IX, it is clearly recognized that other factors than those revealed by tests largely determine achievement both in school and out of school One of the most important of these is what we call "personality." This rather indefinite and indefinable something determines to a large extent success in every field of endeavor

1. *Meaning of Personality.*—This term personality is variously interpreted and is thought of by many as something that is born in an individual and not subject to training In general, personality is the same as individuality: it is that group of qualities and characteristics that make one an individual, that set him off from another individual As such, it is the sum total of abilities, skills, interests, and physical and mental characteristics that he possesses, or, better still, the combination of all these. Defined thus, it comprises everything that an individual has as the result of both heredity and training The term is not generally used in this sense, but is confined largely to those somewhat general characteristics listed as tact, charm, sympathy, aggressiveness, trustworthiness, etc , etc. Probably a better term for these traits and characteristics is "character traits." Hughes merely calls them "individual capacities, attitudes, and interests."[1]

2. *Method of Attack.*—Since the terms used are so general and indefinite, the first necessity would be to make a list of the traits and characteristics that we shall study and to define them

[1] Hughes, W. Hardin, A Rating Scale for Individual Capacities, Attitudes, and Interests, *The Journal of Educational Method*, 3: 56–65, October, 1923.

as clearly as possible. The next step would be to devise methods by which they can be measured or estimated. We are at once confronted with several difficulties. In the first place we must ask whether there are, after all, any such things as general traits, like initiative, tact, trustworthiness, etc. We know that a trait such as initiative is manifested in a particular situation, will it also be shown in another situation rather unlike the first? Are people tactful in all situations? Are they completely trustworthy? Are they always cooperative? We are at once on debatable ground. We are very sure that few, if any, persons manifest such "personality" traits equally in all situations.

3. *The Occurrence of Personality Traits*—If we cannot be sure that character or personality traits are general, what is the use of trying to estimate their strength or even of discovering their existence? This can, perhaps, best be answered by asking another question and answering it What do we mean by an accurate man, a sympathetic woman, a person who is cooperative? An accurate man is one who in certain situations, where it is worth while to be accurate, is accurate. This may be in mathematical calculations where you can depend upon his calculations, or it may be in that what facts he knows, he really knows We can rely upon the accuracy of the information he possesses We obviously do not mean that every time he estimates distances he is absolutely accurate to the fraction of an inch, or that his language is always exact When he gives us the time of day he does not always say, "It is now twelve minutes and thirty-one seconds after nine o'clock " By the time he had said it, the time would have changed. He merely is accurate in certain situations where it is desirable to be accurate; he also probably has the attitude of mind that prompts him to be exact when it is desirable to be exact. So a sympathetic woman is not one who is, *in all cases*, sympathetic, but in situations where this is worth while, not merely to herself but to others There are some situations where sympathy seriously interferes with efficiency In certain phases of social case work, sympathy is a liability rather than an asset and seriously interferes with obtaining accurate data.

It is not always wise to be cooperative There are times when cooperation is harmful In all these cases judgment and discrimination in analyzing situations are necessary before

accuracy, tact, sympathy, or cooperation can wisely be shown. Of course, we are compelled to say that one who shows any of these traits, even unwisely, possesses it. We may also say that a person who shows a trait like tact in *j* and *k* and *l* and *m* and *n* situations, where such a trait is useful, has this trait to a greater degree or more generally than one who shows it in *k* situation only We say he is a more tactful person. We would expect him to show tact in other situations where tact is useful The chances that he will act in a tactful way are much greater than they are in the case of the person who shows tact in only one situation The question may be partially cleared up if we keep clearly in mind the purpose of estimating personality traits This purpose is solely to help in predicting what the individual will do in certain situations in life. We want to get some measure of how he is likely to behave or act when confronted by certain life problems.

4. *Laws of Human Behavior.*—Prediction is based upon certain fundamental laws of human behavior. Three of these laws are stated by Thorndike as follows·

The Law of Instinct—Given any mental state, 'that movement will be made which the inborn constitution of the nervous system has connected with the mental state or part of it The baby reaches for a bright object seen, because by inner organization that sense-presentation connects with that act. For the same reason he puts the object into his mouth when he feels it within his grasp. The boy puts up his arm and wards off a blow, and strikes back at the giver of the blow, because his brain is so organized by nature as to connect those responses with those situations.

The Law of Association.—Given any mental state, that movement will be made which has been connected with it or part of it most frequently, most recently, in the most vivid experience, and with the most resulting satisfaction, and which has been so connected with the general system of thought and conduct present. We say five when we think five; we take off our clothes when we decide to go to bed, we shake hands with a caller, we pat a dog, we stroke a kitten, we put a hat on our head and a coat over our shoulders—because in the past we have done so and without discomfort Each of the factors noted finds illustrations in any day's experiences . . . .

The Law of Assimilation in the Case of Connections of Expression.—If the mental state is a new one, that movement will follow it which would follow a familiar state like it Thus, the person unused to the

paraphernalia of the breakfast table responds to the sight of a finger bowl by drinking from it, the baby runs to pick up a bird, Sir Walter Raleigh's servant threw a bucket of water on him when he saw him smoking a pipe.[1]

5 *Meaning of the Laws*—These laws mean that if an act, *A*, has in the recent past followed a mental state, *X*, we can be fairly certain that if mental state, *X*, occurs again, the act, *A*, will follow. Or if a new mental state, *Y*, that is like *X* occurs, that the act, *A*, will follow, and the probability of its following *Y* will be determined largely by the similarity of *Y* to *X*.

6. *Basis for Prediction*—The power to predict action depends, then, upon our ability to know what mental states are present or will be present Mental states are complex things and are never precisely the same The mental state one has at any given time is the result of many different forces: the situation or stimulus, the set of the mind at the time, previous experience, bodily conditions, general outside conditions, etc Thus, even if we repeat a given stimulus, such as the prick of a pin, we can never be sure that the mental state produced will be exactly the same and therefore we cannot be absolutely sure that the act resulting from the stimulus will be exactly the same Human beings are not automatons, acting in exactly the same way day in and day out Prediction can never be absolute While this is true, yet for practical purposes we may predict with a large degree of certainty, and conditions demand that we predict All social relationships, business, travel, communication of all kinds necessitate the assumption that human beings will act in certain rather definite and predictable ways. The situation is a practical one We are faced with a situation that makes prediction necessary

We cannot determine mental states directly; we can know what they are only by their expression in action In predicting future action we assume that certain situations will produce certain mental states that in turn control action For example, we assume that a red light on a semaphore will always, or generally, produce a certain mental state in all who are driving, and that this mental state will cause each driver to stop Safety and control of traffic depend upon this assumption Drivers do

[1] THORNDIKE, EDWARD L., The Elements of Psychology, New York· A. G Seiler, 1905, pp 274, 276. (*Used by special permission of the publisher*)

not always stop, it is true, and when they do not stop it is fair to assume that the proper mental state was not produced in them. Nevertheless we must assume that, in general, normal people will think alike and act alike in such situations

7. *Methods of Prediction*—Practically, then, we predict upon the basis of the recurrence of certain situations more or less similar, assuming that, in general, certain similar mental states will occur and that these will be followed by appropriate acts Within limits it is possible to predict how a person will act upon the basis of certain past behavior. If, then, we can observe people for a sufficiently long time and note how they act, we should be able to forecast their future action fairly well. We must remember, however, that the accuracy of our forecast will be largely determined by the similarity between the situation in which the trait was manifested in the past and the situation in the future for which we wish to predict.

A valid method of procedure for the determination of personality traits and characteristics would seem to be. (1) select and organize situations (school, home, out-of-school) that are as like the life situations in out-of-school and after-school life as possible; (2) carefully observe the behavior of students in *all* these situations and record the observations. These will be in the form of estimates of traits on the basis of actual acts performed Observations should be made by a number of skilled teachers

If the situations chosen for observation are typical and similar to later life situations and if a student manifests a certain trait on all or most of the situations where such a trait is useful, we may, with fair certainty, predict what he will do later, or say that he has this certain trait or characteristic

8. *Hughes' Rating Scale.*—To be effective each trait, characteristic, or ability must be carefully defined and described and lists of situations should be given in which the traits should be observed Several attempts at such a procedure have been made. Two of these will be described W Hardin Hughes, Director of Research in the Pasadena Public Schools, has been working on this for some years and has devised a "Rating Scale for Individual Capacities, Attitudes, and Interests."[1]

[1] Hughes, W. Hardin, A Rating Scale for Individual Capacities, Attitudes, and Interests, *The Journal of Educational Method*, 3: 56–65, October, 1923; published also as a reprint.

This scale was constructed according to the following principles:

1. *Unity of Definition.*—It is essential that every term in the rating scale be defined as unambiguously as possible If the contents of a given term are too varied, comparable ratings are impossible.

2. *Behavioristic Definition* —Every item in the scale should be defined in terms of behavior We can judge one's possession of a given trait only on the basis of its outward manifestation Objective considerations should enter into all our ratings. From these, however, we may make inferences concerning subjective qualities.

3. *Relation to Situation* —Personal qualities or traits are manifest only in appropriate situations If the situation does not offer an opportunity for the exercise of the trait in question, the rating on that trait is necessarily worthless

4. *Relativity in Rating* —Anything is large or small only by comparison. The average, with respect to any measure, is an objective standard by which superiority or inferiority may be estimated. When this principle is scientifically applied, ratings are significant

5. *Concentration on Single Quality* —Ratings are more reliable when made on a single trait at a time for an entire group than when made on all traits for an individual It is necessary so far as possible to dismiss all other traits from mind and concentrate on a single trait

6. *Competency of Rater.*—Any instrument for measuring, however perfect it may be, is worthless in the hands of the incompetent If a scale for human qualities is to be reliable, it must be used by those who are qualified to judge on the basis of careful observation

7 *Freedom from Emergency* —Other things being equal, ratings are made more reliable when not affected by an emergency. If there is no immediate need for the information, the ratings will, ordinarily, be free from bias. This is an argument for accumulated records

8 *Pooling of Many Judgments.*—It is a well-known fact that the validity of ratings is increased many fold by the pooling of independent judgments All of these combined represent a larger and more adequate view of the individual rated [1]

The general measure of the scale is stated as follows:

This scale is designed for the purpose of measuring in relative fashion those individual capacities, attitudes, and interests which our civilization has found especially valuable and upon which she has placed a premium. The following is a list of the traits to be measured·

[1] HUGHES, W HARDIN, General Principles of Rating Trait Characteristics, *Educational Research Bulletin*, Pasadena, Vols 3 and 4, February-March, 1925

regularity and persistency, trustworthiness, sense of accuracy, confidence in own ability, initiative and aggressiveness, respect for authority, cooperativeness, force of personality, capacity for group leadership, quickness of thought, strength and control of attention, retentiveness of memory. The scale also includes the following special interests: social, executive, literary, scientific and mathematical, mechanical and constructive, athletic, expressive, artistic, musical, and home making.[1]

It will be noted that the scale includes twelve traits and attitudes and ten special interests. We shall here give special attention to the traits

One of the chief points of strength of this scale is the definite description or definition of each trait in terms of behavior.

In order to clarify in the minds of students and teachers the several traits used in the rating scale, we have formulated the following statements concerning the typical characteristics of each.[2]

Then follows a description of all twelve traits. It will be sufficient to give the description of three of them.

III SENSE OF ACCURACY

Lowest Rank	Highest Rank
1. Gives as fact impressions based on inadequate observations or hearsay.	1 Does not give as fact impressions based on inadequate observations or hearsay.
2 Expresses ideas inaccurately and vaguely.	2 Expresses ideas accurately and clearly.
3 Does not evaluate new ideas, but jumps at conclusions	3 Carefully evaluates new ideas before arriving at conclusions
4 Has low standards of workmanship and delivers any kind of work he thinks will be accepted	4 Has high standards of workmanship and does not deliver work that represents anything poorer than the best possible.

IV. COOPERATIVENESS

Lowest Rank	Highest Rank
1 Maintains an attitude of aloofness toward the worthy group activities	1 Participates extensively in the worthy group activities
2 Insists on own preferences even when they interfere with the general spirit and welfare of the group	2 Gives up own preferences when they interfere with the general good spirit and welfare of the group.

[1] HUGHES, W. HARDIN, A Rating Scale for Individual Capacities, Attitudes, and Interests, *The Journal of Educational Method*, 3: 56, October, 1923

[2] *Ibid*, 3: 60.

IV. COOPERATIVENESS (*Continued*)

Lowest Rank	Highest Rank
3 Is extremely selfish in dealing with others	3. Is extraordinarily fairminded and generous
4 Insists on receiving special favors and privileges.	4 Is democratic Does not expect special favors or privileges
5 Refuses to help carry out worthwhile suggestions made by others	5 Seems happy in his work and play with others.
6 Takes very little pride in his group or groups.	6 Is always ready to do his part in any legitimate, cooperative undertaking

XI STRENGTH AND CONTROL OF ATTENTION

Lowest Rank	Highest Rank
1. Is extremely slow to take on the bodily attitude of attention	1 Is quick to take on bodily attitude of attention
2 Allows attention to fluctuate from work at hand to irrelevant objects and thoughts	2 Does not allow attention to fluctuate from work at hand to irrelevant objects and thoughts.
3. Does not ignore distractions nor give sustained attention even when the situation requires mental concentration	3. Ignores distractions and gives sustained attention when the situation requires mental concentration
4 Does not become absorbed in continuous thought or study	4. Becomes absorbed in continuous thought or study.
5 Is generally characterized as "scatterbrained"	5 Is generally alert in new situations [1]

After several years' experience this scale was somewhat revised Special attention was given to those traits which teachers thought they could rate most accurately. The names were changed in a few cases and the descriptions shortened and made more definite The general method of scaling was unchanged. The list is now as follows:

FORM A —TRAITS AND ATTITUDES ON WHICH ALL TEACHERS RATE

I Industry
1 Works regularly and on time.
2 Habitually completes work.
3 Makes judicious use of time

II. Accuracy·
1 Expresses ideas accurately and clearly
2. Accomplishes work free from error
3. Evaluates observations and new ideas

[1] HUGHES, W HARDIN, A Rating Scale for Individual Capacities, Attitudes, and Interests, *The Journal of Educational Method*, 3 60, 61, 62, October, 1923

FORM A (*Continued*)

III. Initiative
   1. Finds ways and means to overcome difficulties.
   2. Shows intellectual curiosity
   3. Starts something new without help.

IV Quickness of thought
   1. Keeps pace with discussions
   2 Reacts quickly to situations
   3 Sees clearly new relations.

V. Control of attention
   1. Quickly assumes attentive attitude.
   2. Ignores distractions
   3 Gives sustained attention

VI Retentiveness of memory:
   1 Requires minimum of repetition
   2 Recalls accurately and completely

FORM B.—TRAITS AND ATTITUDES TO BE RATED ONLY BY TEACHERS WHO HAVE STUDENTS IN GROUP ACTIVITIES

I. Cooperation.
   1 Participates in worthy group activities.
   2. Subordinates self to group
   3. Seems happy in work and play with others.

II. Leadership.
   1 Wins support for his cause
   2 Plans for and directs others
   3 Arouses enthusiasm in the group.[1]

There are three procedures used in rating:

Method I. Normal Distribution.—In this method we apply the principle represented in the "normal curve of distribution." In any large number of unselected cases we find a few who possess a given quality in maximum degree, and a correspondingly small number who possess it in minimum degree. A much larger number, however, possess the quality in average degree This general principle holds whether we consider height, weight, strength, or any other measurable quality or characteristic For a scale consisting of five equal steps, we should have approximately the following distribution of cases·

Lowest	Inferior	Medium	Superior	Highest
7 per cent	24 per cent	38 per cent	24 per cent	7 per cent

But for practical purposes we have adopted a theoretical distribution as follows.

[1] HUGHES, W. HARDIN, General Principles of Rating Trait Characteristics, *Educational Research Bulletin*, Pasadena, Vol. 3, Nos. 5 and 6, February-March, 1925.

Lowest	Inferior	Medium	Superior	Highest
10 per cent	20 per cent	40 per cent	20 per cent	10 per cent

Assuming that the individuals who are to be rated are unselected and representative we should have 10 in 100 marked "highest", 10, "lowest", 40, "medium", and 20, "inferior" and "superior," respectively A convenient method of rating such a group is to have the names on individual cards and then to arrange these cards in five piles according to the percentage distributions required. The rater should, as far as possible dismiss from mind every other item of the scale and concentrate on the one being rated

The method of "normal distribution" is most usable with large and unselected numbers When the number of cases is small and selected the method is defective For this reason another method, based on the same principle, is presented

Method II The Master Scale—To use this method, proceed somewhat as follows Suppose the trait for which a master scale is to be made is *industry*.

1 Recall any student known to possess this trait in highest degree Write his name opposite "Highest" in the master scale

2. Now, recall any student known to possess this trait in lowest degree and write his name opposite "Lowest" in the master scale

3 Then recall any student known to possess the trait in average degree, write his name opposite "Medium"

This gives three definite standards for comparison The other places in the scale may now be filled in with the names of two students halfway between "Medium" and "Highest" and halfway between "Medium" and "Lowest," respectively. You now have a master scale as follows

MASTER SCALE FOR INDUSTRY

Rating	Person	Numerical value[1]
Highest	John Jones	180
Superior	Dick Brown	140
Medium	Sam Johnson	100
Inferior	Henry James	60
Lowest .	Bill Smith	20

[1] The numerical values here assigned represent the half-way point in each fifth of a 200-point scale.

With this master scale in hand, the teacher is now ready to rate her students in industry. Suppose Tom Black is to be rated The teacher quickly decides whether Tom is as good as John Jones, as poor as Ber

Smith, or just about like Sam Johnson, etc. Master scales for the other traits may be made and used in the same way.

The advantages of this scale are that it is objective and that small numbers of students can be rated without immediate reference to the "normal curve of distribution." In the long run, however, the percentage distributions should approximate those given under Method I

Method III. The Graphic Rating Scale.—Similar to the methods described above is the graphic rating method which has been found very reliable in personnel departments of business and industry . . It will be noted that the person who does the rating is freed from quantitative terms. Since the check mark may be placed anywhere in the line, the rater may record any degree of the quality in question If, however, it is desired to compile several ratings for a given trait, this may be done by assigning a value to the length of the entire line A stencil containing as many divisions as are cared for may be used

Any one of these methods properly used should give good results [1]

The form used for the graphic method is here given.

GRAPHIC RATING SCALE

For Habits, Attitudes, and Traits

Name .... Date... . . ..

Last First Middle Semester Year

MINIMUM RATING	AVERAGE	MAXIMUM
	INDUSTRY	
Works sporadically Seldom completes work Uses time injudiciously		Works regularly and on time Habitually completes work Makes judicious use of time
| | | |	|	| | | |
	ACCURACY	
Expresses ideas inaccurately Does inexact work Uses time injudiciously		Expresses ideas accurately Accomplishes exact work Makes judicious use of time
| | | |	|	| | | |
	INITIATIVE	
Succumbs to difficulties Shows little curiosity Seldom starts anything new		Overcomes difficulties Shows intellectual curiosity Initiates undertakings
| | | |	|	| | | |

[1] HUGHES, W. HARDIN, General Principles of Rating Trait Characteristics, *Educational Research Bulletin*, Pasadena, 3. 7–8, February-March, 1925

GRAPHIC RATING SCALE (*Continued*)

RELIABILITY

Neglects promises and obligations	Fulfills promises, obligations
Does not admit error when wrong	Admits error when shown wrong
Is undependable in word and deed	Is honest in word and deed

COOPERATION

Avoids worthy group activities	Participates in worthy group activities
Seems unhappy in team work	Seems happy in team work
Does not subordinate self	Subordinates self to the group

LEADERSHIP

Fails to secure support	Wins support for his cause
Prefers plans made by others	Plans for and directs others
Lessens enthusiasm of the group	Arouses enthusiasm in the group

PHYSICAL VITALITY

Avoids vigorous activities	Active in vigorous activities
Exhibits little endurance	Exhibits endurance in continued effort
Possesses physically weak personality	Possesses forceful personality

Instructions —Keeping the definition of the trait in mind, rate the student between "Minimum" and "Maximum" by placing a check (√) appropriately on the line Try to locate the student according to his standing relative to the average for his age The check may be placed anywhere on the line

Person Rating . School ... . [1]

It is intended that several teachers rate each student and that the final rating for each trait be the median or average rating of all teachers' estimates of the traits

A careful study of the results of these estimates has been made This study clearly shows, so far as success in college is concerned, that there is a general tendency for high scholarship to go with high trait ratings and low scholarship to go with low ratings. It shows the value of recording trait ratings as one of the bases for predicting success in college The values of these ratings as given by Dr. Hughes may be summarized as follows:

[1] HUGHES, W HARDIN, General Principles of Rating Trait Characteristics, *Educational Research Bulletin*, Pasadena, 3 9, February-March, 1925.

1 Trait rating affords the teacher a better understanding of the individual student. The teacher cannot conscientiously fill out the record unless she knows

2 It affords a basis for the modification of school and classroom procedures If these traits and attitudes are valuable in education, then the school situations and methods need to be adjusted to their development

3. It gives a better understanding of special groups, such as above-average and superior students who are doing poor school work, or below-average and average students who are doing superior school work, which entitles them to membership in honor societies, etc

4 Follow-up of trait rating brings out the fact that teachers' marks for scholastic achievement are based, to a large extent, on the student's possession of desirable character traits These data indicate that teachers should be trained to give marks for scholastic achievement alone, and that other marks should be devised for character traits and attitudes, because they are important enough to deserve separate consideration

5. Cooperation of parents in filling out trait-rating scales for their own children will tend to bring about a better understanding between the home and the school, resulting in better cooperation

6. Self-rating by the students, on the same scale upon which they are being rated by teachers and parents, will tend to turn the students' attention to the importance of cultivating proper traits and attitudes. Students are inclined to attach importance to things which are being measured, recorded, and used

7 Justice in marking and teacher judgments will be more apt to be accorded all groups of students when teachers and counselors have a more accurate knowledge of the character traits of their students than they could possibly gain by their own subjective judgments

8 Trait rating and analysis will result in more scientific counseling, because it will help to furnish a wider basis of knowledge and information about the students upon which to predicate advice [1]

9. *Hartson's Rating Scale.*—Another experiment in personality ratings is that by L. D. Hartson of Oberlin College The method of procedure is not strikingly different from that of Hughes, except that specific abilities in various subjects are given as well as general traits The methods of rating used is the graphic method already described by Hughes Dr. Hartson describes the method used to secure relevant factors as follows:

The experiment about to be described was undertaken to ascertain the extent to which the errors of the rater could be obviated by eliminating those elements of vagueness and generality. The items selected

[1] HUGHES, W. HARDIN, Organized Personnel Research and Its Bearing on High School Problems, *Journal of Educational Research*, 10 386–398, December, 1924

for the scale are specific and objective. As a safeguard against the danger of making a purely arbitrary selection of the items to be rated, a systematic survey was made of the judgments of the Oberlin faculty concerning the factors that figure in determining the student's success. The fields covered by the investigation were English, mathematics, the foreign languages, the natural sciences, and the social sciences, including philosophy. From the mass of factors thus compiled by personal interview those items were selected which appeared to be the most representative. The final selection includes twenty-two general factors and an average of a dozen other factors specific to each of the scales.[1]

In order that the nature of the scale may be understood, the Rating Scale for English students is given and also that for General Traits.

OBERLIN RATING SCALE FOR ENGLISH STUDENTS[1]

Student ______ Class ______ Instructor ______

This scale represents an attempt to list the abilities that figure in determining the success of students in the field of English. It is put forth tentatively with the expectation that in its administration improvements will be suggested. Provision is made for the estimation of each specific ability. Place a check at that point on the line which in your judgment, represents the student's present status with reference to the specified ability.

1. His (her) use of grammar and spelling is

habitually correct								very faulty

2. His (her) command of English vocabulary for expressive purposes is

extensive								very limited

3. The structure of his (her) sentences is marked by

logical unity								looseness

4. His (her) manner of expressing ideas is

bromidic								individual

[1] Used by special permission of the author.

[1] HARTSON, L. D., An Experiment with Rating Scales Based upon a Tentative Functional Analysis of the Subjects, Society of College Teachers of Education. *Educational Monographs*, No. XIV, 1925, Studies in Education, Chicago: University of Chicago Press, pp. 49–50.

OBERLIN RATING SCALE FOR ENGLISH STUDENTS (*Continued*)

5 In description and exposition he (she) employs terms that are

vague and general

clear-cut

6 His (her) observations of the human drama display

originality

sterility

7 His (her) appreciation of rhythm, style, and other rhetorical factors is

uncultivated

refined

8 Measured in terms of experience, for his (her) age he (she) is

mature

very immature

9 The character of his (her) general information is

accurate and encyclopedic

vague and smattering

10 In interpreting the meaning of questions and assignments, he (she) is

dull

keen

11. In compiling data for an argument or exposition, he (she) is

resourceful

helpless

GENERAL TRAITS

1. His (her) sense for the fine distinctions of word meaning is

keen

undiscriminating

2 His (her) written work indicates a habit of

orderliness

disorderliness

3 In reporting the important aspects of a subject, he (she) displays

a sense of proportion

poor judgment

4 When it is a matter of following a thought or narrative to its logical conclusion, he (she)

adheres to the subject

becomes lost

5 His (her) summaries and analyses are

concise and pointed

vague and rambling

GENERAL TRAITS (*Continued*)

6 When it comes to noting inconsistencies in statement, he (she) is

blind | alert

7 When shown his (her) errors, he (she)

sees them immediately | fails to see them

8 When offered suggestions, he (she) is

perfectly open-minded | intractable

9 His rate of improvement is

very slow | rapid

10 He (she) impresses one as an individual with

unlimited energy | no reserve power

11 His (her) willingness to work is

distinctly limited | unlimited

12 His (her) manner of attacking a subject is

procrastinating | expeditious

13 With reference to the interest he (she) displays, he (she) may be described as

enthusiastic | apathetic

14 His (her) impulses to make inappropriate and untimely remarks are

inhibited | unrestrained

15 When the occasion is appropriate for expression, he (she)

volunteers readily | is inert

16 In the preparation of assignments, he (she) is

consistently dependable | erratic

17 In the matter of keeping special appointments, he (she) is

always punctual | consistently tardy

General Traits (*Continued*)

18 On occasions when it is important that instructions be followed, he (she)

adheres to them implicitly — disregards them

19. When the task demands persistence, he (she) is

a quitter — tenacious

20 When tempted to do a dishonorable act, he (she)

stands like a rock — does the easy thing

Omit the following items These ratings will be made from the records kept in the deans' offices

21. In class attendance, he (she) has the following rating

22. In punctuality, he (she) has the following rating

These scales explain themselves for the most part. The varying length of the spaces corresponds roughly to the normal distribution curve. The results of these tests were compared with the results of various intelligence tests. Based upon these as standards their reliability is expressed by a coefficient of correlation of 0.72 ± 0.0368, which is a fairly high correlation and indicates that they are probably fairly reliable

II. Self-analysis Blanks

1 *Limitations of Estimates of Self.*—We have already seen how very difficult it is for one person to know another person or to estimate at all accurately what he thinks or what his mental states are. Can we obtain any help from an analysis of the individual by himself—should he not know himself better than anyone else knows him? At first sight, this seems very reasonable. The reasonableness of it depends largely upon the degree to which we really know ourselves and can predict what we will do It is affected by the general tendency to think well of ourselves no matter what we think of other people; to give ourselves the benefit of the doubt; to magnify certain acts and traits and to forget or minimize other traits. Few people are as accurate in observing themselves as they are in observing other people. Then, too, we usually feel that "we are masters

of our fate" and can, at any time, act in a certain way regardless of how we have acted in the past Like Rip Van Winkle, "this drink doesn't count." Other people, observing what we actually do from day to day, know, perhaps, more surely, what we will do, they know that the drink that Rip takes will not be the last In spite of these inaccuracies and limitations, however, self-analysis has many things to commend it It furnishes a very helpful supplement to other observations and estimates.

2 *Brewer's Self-analysis Blanks* —Self-analysis blanks are of many kinds and vary from very short and simple forms to those that are long, involved, and complicated. It is usual to include some self-analysis questions in nearly every personal record of a student In order that the different items or elements usually included in self-analysis may be clearly seen, samples of a few representative blanks are given An example of the short blank is that suggested by Brewer as a list of questions to be asked pupils:

1 What kinds of work have you done?
2. For which work have you received pay?
3. What kinds of work do you like best to do?
4 Why do you like them?
5 Which school studies do you like best?
6 What do you like about them?
7 Name, in the order of your present preference, three occupations which you are considering
8 Why are you considering these occupations?
9 Have you definitely decided on the occupation you named first?
10 How do you intend to prepare for any of these occupations?[1]

Brewer also devised a blank that is for a more specific purpose and is intended to be used in the junior high school This he calls a "Vocational Guidance Score Card"

VOCATIONAL GUIDANCE SCORE CARD

Name . . Date . .
QUALITIES REQUIRED FOR SUCCESS AS A . AND QUALITIES I COULD DEVELOP IN THAT OCCUPATION

Directions —This exercise is planned to aid you in thinking about your future occupation It must not be taken too seriously because you probably do not know very much about the occupation, and you are not sure of your own undeveloped powers. Nevertheless, it can help you to see your needs

[1] BREWER, J M , and others, Case Studies in Educational and Vocational Guidance, Boston Ginn and Company, 1926, p 240 (*Used by special permission of the publisher.*)

The first column relates to the qualities one needs in order to succeed in that vocation, the second is for the qualities you can develop if you choose to enter that occupation At the bottom are spaces for additional qualities required by the particular work you are considering Secure help on the first column if you need it Mark an X in the appropriate column; 60 very little; 70 not very much, 80 average amount; 90 above average, 100 very great amount. Where two contrary words are given, as in numbers 6 and 19, cross out the one which does not apply to the occupation you are considering.

This paper has little or no value as a record, its chief purpose is to aid you in thinking about your aims and educational opportunities

	Vocational Needs					I Can Develop				
	60	70	80	90	100	60	70	80	90	100
1. Physical strength and vigor										
2. Continuous good health										
3. Freedom from bodily defects										
4. General mental capacity										
5. Mechanical skill										
6. Willingness to work indoors, outdoors										
7. Imagination										
8 Ability to attend to details										
9 Accuracy										
10 Orderliness and neatness										
11 Promptness										
12 Perseverance										
13. Willingness to keep on studying										
14 Speed of work										
15. Initiative and resourcefulness										
16. Ability to follow directions										
17. Courage										
18. Adaptability to change and surprise										
19 Liking for variety, sameness										
20. Ability to lead other people										
21. Ability to cooperate and tact										
22. Ideals of service and unselfishness										
23. Self-respect										
24 Self-control and patience										
25 Ideals of honesty										
26 Reliability, dependability										
27 Sense of humor										
28 Cheerfulness										
29 Good citizenship										
30. Use of spoken and written English										
31.										
32.										
33.										
34.										
35										

JOHN M BREWER, Harvard Bureau of Vocational Guidance

As the blank indicates, it is mainly for the purpose of serving as a stimulus to direct the thought of the student to the investigation of qualifications for different occupations As an addition to this blank that would make it even more helpful, we might suggest another section between "Vocational Needs" and "I Can Develop," that might be called "What I Have Now." Such a blank filled out by the pupil would form a very fruitful topic for personal interviews between pupil and teacher The added section would be helpful in calling the pupil's attention to this present condition, to the abilities or lack of abilities that he now shows in his school work.

3. *The Y.M.C A. Blank*—A much more ambitious blank is that prepared by the Boys' Work Division of the International Committee of the Y M C A. The blank is too long to be included here, but the general organization and a sufficient number of selections will be given to show the general nature of the blank as a whole

SELF-ANALYSIS BLANK FOR PURPOSES OF VOCATIONAL GUIDANCE DESIGNED FOR USE BY OLDER BOYS UNDER DIRECTION OF ADULT LEADERS

The purpose of this blank is to help older boys and young men locate their natural interests and capacities, particularly those which tend to show vocational tendencies

Do not hurry. Selecting one's vocation is serious business

Be thoroughly honest Your own particular abilities are what you are seeking to discover

Let your answers indicate your present interests and ambitions for the future.

Ask questions of your leader if in doubt at any point.

Section A. PERSONAL HISTORY

(Ten items of personal history)

. ...

Section B PERSONAL CHARACTERISTICS

I Am I independent and self-reliant, do I like best to lead (in work, games, groups, or "stunt") or am I happier when another leads and I follow and help?

Think it over like this—

Would I rather be captain, the directing head? . .

Or, would I just as soon have some leadership but not too much responsibility?

Or, would I much rather do the actual work myself (as mechanic, farm worker, salesman, artist) and let someone else do the directing and the worrying? . .. .

2. Am I a team man, can I cooperate? . . . . . .
3. Do I take particular delight in discovering my own way to do things? . . . .
4. Am I naturally obedient, following instructions readily? Or, do I like pretty much to rely on my own judgment?. . .
5. Is it difficult to make my mind stick to a particular thing at a particular time?. . . . . .
6. Do I make a strong finish? . or quit rather easily?
7. Is it easy and interesting for me to make new friends? Or, do I enjoy more old friends and acquaintances?
8. As a rule, am I happier when I am with other people? . or, when I am alone? . . . .
9. Can I get along with most people? . What sort of person annoys me most? . . . .
10. Thinking it over carefully, would I rate myself as extra good, fair, or poor on the following matters:

    (Note Put a check (√) under Extra Good, Fair or Poor for each quality in the list)

	Extra Good	Fair	Poor
Enthusiasm (Full of earnestness or zeal)			
Carefulness (Conscientious attention to details)			
Punctuality (Being on time)			
Honesty (Acting on the square, not somewhat lax)			
Energy (Having drive and punch)			
Thrift (Saving, not being an easy spender)			
Hopefulness (Cheerful rather than gloomy)			
Self-confidence (Not overdependent on others)			
Persistency (Stick-to-it-iveness)			

11. (*a*) Have you any habits which you feel might keep you from the largest success in life?

    (*b*) Would you like help or suggestions about avoiding or overcoming certain habits or temptations? . . . .

Section C. INTERESTS AND AMBITIONS

1. What do you like best for amusements and recreations? Check your favorites. (A list of 30 types of amusements and recreation)
2. Of the following subjects, check those most interesting to you Cross out any you particularly dislike (Various subjects offered in all types of school)

   Past or present hobbies . . . .

4. What kind of moving pictures do you like? . . . .

5 Of all the books you have read, which two or three do you like best?

6 What magazines do you read and enjoy most?
7. How do you spend most of your leisure time?
8 Have you ever thought of the difference between having money to spend and the possibility of making money go to work for you?
9. If you could choose now the occupation you would like to be engaged in ten years from today, what would it be?
10 Do you think you have reasonably good natural ability for this kind of work?
11 Are you willing to sacrifice present pleasure in time and money to fit yourself for better things in the future?
12 Look over the following list of differing types of work, check one in each pair *if you are interested*
(Seven pairs like the following)
(1) Outdoor work (2) Dealing with people
Inside work Working with things
13 Have your parents or friends suggested any particular career for you?

What career? . . . . What do you think of their suggestion?
14. Check any of the following occupations in which you are especially interested—
(Many occupations listed under the following heads)
Skilled, Mechanical, Managerial and Commercial, Scientific, Literary and Humanic, Artistic
15 Can you give any outstanding reasons for these particular selections?

As indicated, these are filled out by each boy with the help of adult leaders and form the topic for individual conferences.

4 *Fryer's Self-rating Scale.*—A form of self-analysis very similar to the "Personality Ratings" of Hughes and Hartson is used by Fryer as "Self Measurement "[1] Each person rates himself under nine different heads. He also subjects himself to some form of an intelligence test and indicates his rating in the test He thus has ten different scales on which his relative position is given The ten groups or headings are here given together with a short description of the meaning of each.

I *Health* —Rating Scale of Physical and Nervous Condition.

II *General Intelligence* —Ability to learn, to change and perfect old forms of behavior, to modify adjustment or make adaptation to new and difficult

[1] FRYER, DOUGLAS, Vocational Self-guidance, Philadelphia J. B. Lippincott Company, 1925, pp. 21–51 (*Used by special permission of the publisher*)

situations of life—including a conscious capacity for comprehension, deliberation, and judgment, for analysis and synthesis

III. *Intelligence.*—Rapid Self-survey. Examination rating

IV *Interest*—Ability to enjoy work, zest for investigation, craving for original work, including enthusiasm, cheerfulness, optimism, hopefulness, ambition

Interest in *our* work is necessary to success We might ask ourselves Do we attack our tasks with enthusiasm, with cheerfulness, with hopefulness? This is essential

V *Industriousness.*—Ability to work hard and long hours, the power of application and attention, including concentration, persistence, stick-to-itiveness

Industriousness is an essential quality for achievement in any occupation. Hard work is its popular designation, yet it is something more than this: It is persistent enlightened endeavor driving us on to success

VI. *Leadership*—Ability for executive work over details or people—including justice, independence, self-reliance, initiative, decisiveness, courage, aggressiveness, thrift

Some form of leadership is necessary in almost any kind of work Executive work may be the directing of people or of details The best and most lasting leadership is that characterized by justice and fair dealings Leadership necessitates independence in judgment It requires self-reliance, initiative, and courage and to it are necessary aggressiveness and sharp decision We might ask ourselves: Is this leadership quality applied to our own lives? A test of this is whether or not we have a well-organized thrift plan Leadership over ourselves is essential to a successful, happy life

VII *Cooperativeness.*—Ability to work with others, including diplomacy, discretion (tact), loyalty, faithfulness, obedience, unselfishness, patience, politeness, "sense of humor," sympathy, sublimation.

Can we work with others? Cooperativeness necessitates smooth dealings with other people In doing this, we must make those people with whom we are dealing feel a sense of superiority, yet maintain our personal dignity, our own superiority Discretion, diplomacy, tact are essential to cooperativeness (This quality is further described in detail)

VIII *Moral Attitude*—Ability for right moral or social judgment and behavior, including integrity, responsibility, trustworthiness, carefulness, truthfulness, honesty in thought, time, work, and money.

Society is organized upon integrity Modern business could not exist without honest dealings There is little to our credit in having the moral attitude surrounding us with respect The law punishes the flagrant transgressor Society soon finds out and labels the "sponger."

IX. *Language Ability*—Expression and understanding of spoken and written English

X. *Workmanship*—Ability in occupational adeptness, judgment, and responsibility, acquired in all mental and manual labor.

The method of self rating is much like that employed by Hartson and is shown by the Interest Chart.

IV Interest

Ability to enjoy work, zest for investigation, craving for original work, including enthusiasm, cheerfulness, optimism, hopefulness, ambition

Interest in *our* work is necessary to success We might ask ourselves Do we attack our tasks with enthusiasm, with cheerfulness, optimism, hopefulness, ambition?

Find the average at the "C" group List three individuals for each group. *Then Place Yourself*

Highest Fifth	1 Mr. ..
A	2 Mr
Excellent	3. Mr
Second Fifth	1. Mr
B	2 Mr
Good	3 Mr. ...
Middle Fifth	1. Mr
C	2 Mr
Average	3 Mr
Fourth Fifth	1 Mr
D	2 Mr
Poor	3 Mr
Lowest Fifth	1 Mr
E	2 Mr
Unsatisfactory	3 Mr [1]

[1] Fryer, Douglas, Vocational Self-guidance, Philadelphia J B Lippincott Company, 1925, p 40

This device is thus a rating of the self with reference to the opinion we have of other persons whom we know and rate. Each of the nine "traits" or characteristics is treated in the same way In some, Health, Language Ability, and Workmanship, each of the five divisions of the scale is described in such a way as to indicate the meaning of the various fifths of the scale Finally, after all ratings have been made, a profile chart is constructed so that each individual can see how he stands regarding each trait.

PROFILE[1]

Date . . . of . . . .

Traits	Rating upon Traits Rank in Relation to Other Adults				
	E Lowest Fifth 0–20%	D Fourth Fifth 20–40%	C Middle Fifth 40–60%	B Second Fifth 60–80%	A Highest Fifth 80–100%
I Health (Physical Examination) .					
II. Intelligence (Personal Rating) .					
III. Intelligence (Examination Rating)					
IV. Interest					
V Industriousness					
VI Leadership					
VII. Cooperativeness					
VIII Moral Attitude					
IX Language Ability					
X. Workmanship .					

[1] FRYER, DOUGLAS, Vocational Self-guidance, Philadelphia J B Lippincott Company, 1925, p 40.

Figure 19 gives the profiles of two different individuals who rated themselves according to the directions.

5. *Efficiency of Self-analysis Blanks*—These forms of self-analysis blanks are entirely typical of the methods now in use. How efficient are they and how generally should they be used?

At the outset, we should emphasize one point already brought out, that such methods can never be relied upon to give us entirely trustworthy facts about individuals. They often do contain facts, it is true, but you can never be sure which statements are facts and which are not In the first place, an individual may be perfectly honest in his statements about himself, but he may be mistaken, or he may have forgotten; he may at times even confuse himself with someone else. It is usually very difficult to be sure whether we actually remember an event in our early childhood or whether we have been told so often that it

happened that we seem to remember its occurrence. In the second place, unless the questions are carefully worded, they often reveal what would be the best answer; that is, what a really efficient person would be, rather than what the one who fills out the blanks really thinks of himself. The tendency, sometimes unconscious, sometimes very much conscious and premeditated, is to answer what the person thinks should be characteristic of himself The answers are, therefore, untrustworthy as accurate data. Their chief function is to provide a
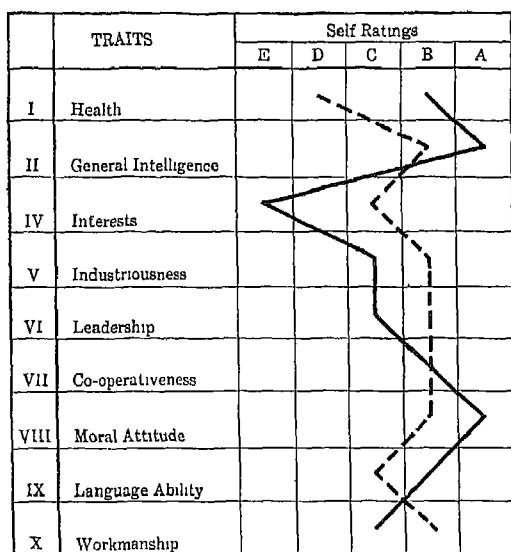
FIG 19 —Self-rating profiles of two individuals

stimulus for careful thinking and for introspection, for "taking account of stock," for evaluating qualities and experiences in order to find what course of action would be the best one.

They are used very effectively in connection with the study of occupations to emphasize the qualifications necessary for the job, and to add a personal touch to the consideration of the things that workers on the job actually do, this helps the person filling out the blank to decide whether the particular kind of activity is one that would be desirable for him Self-analysis blanks are also helpful as a preparation for an interview, giving the counselor something definite as a basis for discussion and enabling the

counselor to bring home to the student, when necessary, the need for proving that he really has the desirable qualities that he claims to have.

These methods should properly be included under "Methods of Guiding Pupils" rather than under "Methods of Securing Facts" They are given here partly because so many counselors unwisely rely upon them for facts and partly because they illustrate the active part that must be taken by the individual in the entire guidance process. One real danger in this method, especially in the junior and senior high schools, is that some children are too much inclined to morbid introspection; undue emphasis upon his inner life may sometimes lead one to the borderland of insanity. For such a person, self-analysis blanks are a positive danger and should be avoided. Normally, however, they are very useful as supplementary agencies

QUESTIONS

1 What is personality? Can it be developed? Can it be measured?

2 To what extent can we predict what others will do?

3 In what ways is personality an important factor in life?

4 It is said that girls receive higher marks than boys for the same achievement in school If this is true, does any phase of personality help to account for it?

5. In making out a personality blank, is a person likely to underestimate or overestimate his abilities?

6. In what ways may personality blanks be wisely used?

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Chapter XI

THE VALUE OF THE PSYCHIATRIST, THE VISITING TEACHER, AND CASE METHODS IN STUDYING THE INDIVIDUAL

Tests, such as those described in Chap IX, and the estimates of personality or character traits, outlined in Chap. X, give very valuable data that materially assist in the guidance process. But, as already indicated, there are certain very important facts about individuals that cannot be obtained by these devices. Some of these relate to the emotional characteristics, others to the family, the home, and to general social conditions surrounding the individual In this chapter, we shall describe briefly some methods and agencies that are helpful in securing such information

I The Psychiatrist

1 *The Importance of the Emotional Life* —The importance of the emotional life of the individual in determining his conduct is too apparent to need discussion Emotions are our most fundamental instincts and powerfully affect all our behavior Differences in kind and amount of emotions often tend to obscure or even to counteract other differences, even those of general intelligence. A man who has developed almost perfect skill in the performance of a certain operation, so that he is able to produce with amazing rapidity the most beautiful and finished product, may, as the result of some unfavorable incident, acquire such a violent distaste for the work as to make it impossible for him to use his skill effectively. Fear, contracted in early childhood, either of the dark or of animals or of people, may so overpower a person as to close effectually certain occupations for which he was admirably suited by general ability and training

2. *Tests of Emotions* —The importance of the emotional life in guidance is recognized in some of the tests mentioned in Chap. IX. The Downey Will-temperament Test, the Pressey X-O Test, and the Brotemarkle tests are some of these. They are

helpful, but very inadequate in securing all the information that is needed Within comparatively recent years there have developed specialists, called psychiatrists, who are especially trained for just such work.

3 *Field of Psychiatry*—Mental diseases have been recognized for many years, both in law and in medicine. Physicians who specialized in mental diseases were called alienists and were often called upon in court to testify regarding the sanity of the accused. They were chiefly interested in the diagnosis and institutional care of extreme cases of mental illness As the scientific care and treatment of such cases developed, interest spread to those borderline cases that could not be called insane nor even mentally ill, but in which emotional disorders affected the health or the normal functioning of the individual.

This is the field of psychiatry It has been defined as "that branch of medicine that deals with the diagnosis and treatment and prevention of mental diseases and disorders" The work of the regular physician, for the most part, is to heal physical illness; the major work of the psychiatrist is to heal mental illness. But just as an increasing duty of the physician is now being placed upon keeping a person well, keeping his body fit, so an increasing emphasis in psychiatry is now given to keeping the mental and emotional life healthy, not only in removing mental and emotional handicaps, but in preventing their appearance.

The psychiatrist is usually a physician specially trained for such work, with a wide experience in dealing with abnormal mental conditions. By the nature of the case, these abnormal mental conditions usually are, or result in, emotional conditions that are the especial concern of the psychiatrist. It is difficult, if not impossible, to distinguish certain phases of the work of the psychiatrist from certain phases of the work of the psychologist. Each claims a right to parts of the field of mental therapy. At present, the medical specialist seems to have the right of way to this special field It is also somewhat difficult to distinguish the psychoanalyst from the psychiatrist. Most psychiatrists are really psychoanalysts to a degree, and must be The term "psychoanalyst" is now used so frequently to indicate any sort of attempt to analyze the mind, from those that are really scientific and helpful to the veriest quackery, that respect-

able psychiatrists are averse to using the term at all. Some of these discredited methods of "psychoanalysis" are described in Chap XII

4. *The Development of Psychiatry*—Psychiatry has been very slow in its development, but now nearly every large city has one or more reliable psychiatrists who may be consulted and who will help in the diagnosis of abnormal mental, especially emotional, conditions that affect the individual They are of great assistance in detecting cases of incipient dementia præcox and thus preventing serious consequences to the individual and to society. They are often successful in tracing the causes of so-called "kleptomania," of various fears, of special antipathies toward parents or teachers or companions, of abnormal sex desires, of extreme cruelty, or of the "inferiority complex," and of discouragement These cases are diagnosed by observation of behavior, by sympathetic questioning, by securing the family history, and in a variety of other ways. Sometimes the conditions causing the mental state cannot be removed, but even then something may be done to change the attitude of the boy or girl toward the conditions. Often it is possible so to change conditions that the emotional attitude of the child is corrected and the difficulties removed. Sometimes the causes of the emotional conditions are traced back to the early life of the child and the process of rebuilding begun so that he is able to overcome the fears that kept him from succeeding

5. *Limited Facilities for Psychiatric Work.*—The field is so large and the number of psychiatrists so small that only a few individuals, at the most, can now be reached. It is but natural that the major part of the work of such specialists should be devoted to the extreme cases—those who really have mental and emotional illness These constitute many of the "problem cases" arising in the school. When the need is more fully recognized and when more men and women devote themselves to this specialty, we shall be able to give more time to those children who are not mentally ill but who need help, and so, we hope, prevent mental illness and secure more adequate mental and emotional adjustments to home, to school, and to work.

6 *Danger of Psychiatric Quacks*—As with all new methods of curing and preventing diseases, this field has its charlatans and

quacks; untrained or half-trained men advertise themselves as psychiatrists and claim to be able to cure all forms of mental disease and to remove emotional handicaps of all sorts These persons are dangerous in the extreme Before consulting a psychiatrist great care should be taken to make sure that he is well trained and reliable

II. The Visiting Teacher

1. *Inadequacy of Schools for Securing Information* —There are certain facts about children that are of special importance but that are very difficult to obtain with the ordinary machinery of the school These have to do with the home life and the general out-of-school conditions It is impossible for the school to do its work well unless it knows something about home conditions and the general social life of the children. The school is not the only agency responsible for education; all the forces affecting the child in any way must work in close cooperation before adequate education can be given. This dependence has long been recognized, and schools have attempted to provide some way by which teachers could come into close contact with the homes Some superintendents demand that each teacher visit the home of every child in his room or his classes at least once each year This has been generally abandoned because of the physical impossibility of carrying it out. Moreover, such forced visits are by no means always helpful. They are often perfunctory, like social calls, and not infrequently create a feeling of hostility Some teachers are well adapted to such work and others are not.

2. *The Origin of the Visiting Teacher Movement* —In a study reported by Oppenheimer,[1] the average number of visits made by regular teachers (not including kindergarten teachers) during the year was three This probably is as many as can be expected under normal conditions. Such haphazard visits so infrequently made cannot be relied upon to give much help in securing facts that are needed for guidance. It is also quite clear that the classroom teacher is usually not well enough equipped with the technique of visiting and of securing information that is reliable. To be effective, the visitor must be specially trained for such work. Out of this need has arisen the visiting

[1] Oppenheimer, J J, The Visiting Teacher Movement, New York: Joint Committee on Methods of Preventing Delinquency, 1925, p 24

teacher This movement is comparatively recent, the first actual appointment of such an officer in any school system being in 1906, in New York City, in Boston, and in Hartford. This was preceded, of course, by many years of more or less philanthropic work along the same line

3. *The Function of the Visiting Teacher.*—The chief emphasis in the work of the visiting teacher is upon the problem cases—the cases of maladjustment It has a much larger field than mere visits to homes

> The visiting teacher movement is concerned with (1) helping the school to give the individual child the fullest possible growth as a personality, (2) integrating the social organizations and groups that are interested in the education and welfare of the child, and (3) helping the school make such adjustments as will meet the needs of individual children and groups of children [1]

We thus see that the visiting teacher not only assists the child in his adjustments, but interprets the school to the home and also interprets the home and out-of-school life to the school. In doing this, she occupies a key position in the educational system

4 *The Work of the Visiting Teacher.*—The general work of the visiting teacher may he seen in the following outline given by Oppenheimer [2]

1. Types of problems·

In School	Out of School
Scholarship	Home conditions
Conduct	Delinquency
Health	Recreation needs
Attendance	Early employment
Lateness	

2. Cases referred to the visiting teacher by

   Principal Teachers Parents Agencies

3 Procedure of the visiting teacher·

A. Investigation and Diagnosis

1 Teacher or principal gives statement and information to visiting teacher.

[1] OPPENHEIMER, J J , The Visiting Teacher Movement, New York Joint Committee on Methods of Preventing Delinquency, 1925, p 26.

[2] *Op cit.*, pp 133–134

2. Visiting teacher looks up child's school records
3 Observes child in class
4 Confers with child
5. Visits home and neighborhood
6 Calls social service exchange if necessary
7. Confers with agencies at present or formerly interested
8 Records facts on information card and record form
9 Sends information card back to teacher and principal
10 Makes first diagnosis and tentative plan of treatment
11 Confers with principal or teacher in regard to plan

B. Treatment

1. Confers with child
2 Secures home cooperation or adjustment
3. Secures school cooperation
4 Gets cooperation of community agencies if necessary
5 Records development of case on record form
6 Makes final evaluation of diagnosis and treatment

C Follow-up

1. Keeps in touch with child after immediate cause of reference disappears
2. Gives education, personal, and vocational advice
3. Keeps in touch with the child after he leaves school

III. Case Methods[1]

1. *Origin of the Case Method*—The outline of work of the visiting teacher just given is founded upon the particular method of investigation called the "case method." This method has been developed in recent years in social work It arose because of the necessity for securing exact information about the condition of those applying for relief Social relief organizations are

[1] The case method of *investigation* should not be confused with the case method of *teaching* as used in law schools and especially by Brewer in guidance "Case Studies in Educational and Vocational Guidance," Ginn and Company, and "Cases in the Administration of Guidance," McGraw-Hill Book Company, Inc , are two very useful books compiled under the direction of Dr. Brewer that are based on the case method of teaching In these are assembled many actual cases of individuals who need guidance or who have been partially guided, certain facts are given regarding each case, these are developed and presented in such a way that important points in the guidance process are clearly shown. They are devices for *teaching* the principles of guidance and for showing the best methods of administering guidance The case method of investigation is a method used to *discover facts* about individuals It provides the facts about the individuals, or cases, that are used in the *case method of teaching*

no longer agencies merely for the distribution of "charity" to those who are needy or who apply. Their function is to assist in discovering the causes of need and in taking such action as will, as far as possible, remove the causes This function of the social relief organizations has necessitated the development of certain techniques (1) for obtaining facts, (2) for diagnosis, and (3) for treatment This method or technique has been called the case method, because the attention is centered upon the individual case and because it follows, in the main, the procedure of the more scientific physician.

2 *A Method of Research*—As we have already said, the essential elements are (1) diagnosis, and (2) treatment. To this should be added (3) follow-up, both for purposes of checking the reliability of the diagnosis and the adequacy of the treatment There is nothing peculiar about the case method, for it follows in every respect the generally accepted procedures in all scientific investigation Its chief value lies in exactly this fact, that it does follow scientific procedure and rejects the haphazard methods so frequently employed in the treatment of problem cases, both in school and out of school. It emphasizes (1) delaying conclusions concerning the causes of the case and delaying treatment until adequate information is secured, (2) securing information that is accurate and reliable, (3) making tentative diagnosis, (4) outlining preliminary treatment, (5) following up the case to determine the adequacy of the treatment as a basis for securing more data and for making modifications in the treatment

3 *Outline of the Case Method.*—The condensed outline given below will show more clearly the general nature of the method [1]

I INFORMATION.

A. Symptoms—The first step is always to get at the facts that indicate that the child is a problem case, not his history but the symptoms that have been noted This involves finding his chronological age, the marks received in various subjects, instances of misconduct, latenesses and absences from school, etc.

All statements must be actually verified They must be taken from school records when possible and only first-hand information accepted The information thus obtained will often be sufficient to

[1] MORRISON, HENRY C, The Practice of Teaching in the Secondary School, Chicago· University of Chicago Press, 1926, pp 618–639 (adapted and condensed).

show that the case is not a problem one at all. Care should be taken here to exclude all that does not have to deal with present symptoms. History is valuable only as it throws light upon the causes of symptoms, but when gathering data on symptoms, history should be excluded When the data are all in, they should be written up carefully and summarized

B *Examination* —With the symptoms noted, more precise information regarding the case is obtained by various tests and examinations. These are, of course, selected with reference to the needs of the particular case Some of these are here given

1. Psycho-physical.
   a Vision—normal
   b. Hearing—normal
   c. Coordination (neuromuscular)—no good tests are available, but careful observation will give helpful data
   d Speech—normal
2. Health
   a Vital index (height-weight ratio)
   b. Nutrition.
   c Teeth
   d General physical condition.
3. Educational
   Standard tests of various kinds suitable to the grade of the pupil. These are to be used to discover any fundamental weaknesses in his previous training and also to check up on the marks he has received
4. Mentality
   General intelligence test It is best to give several types in order to avoid accidental results

C *Health and Physical History* —Very careful and exact information should be obtained not only of serious illnesses, scarlet fever, measles, etc , but of other illnesses and operations for adenoids, tonsils, and any accidents that may have affected the health or resistance If possible, a complete record of growth in height and weight and physiological maturity should be obtained and carefully recorded

D *School History*

1 Promotions.
2 Kind of work done
3 Changed location—home and school.
4. Quality of schools attended
5 Relation with individual teachers.

E *Family History*

1 Ancestry, parents, brothers and sisters, nationality, mental and criminal history, etc.
2. Economic status and history.
   The previous and present financial and economic situation of the family.

3. Cultural resources of the home
   Education and training of parents, books, music, and cultural atmosphere of the home
4. Relation within the home—with parents and brothers and sisters
5. Attitude of parents toward society.
6. Adjustment of parents to American standards
7. Control exercised by parents of children—kind and amount of control.

F *Social History and Contacts* —The pupil's social background outside the school and the home
1. Church and Sunday school, Boy Scouts, etc
2. Associates
3. Summer camps
4. Gang affiliations
5. Abnormal sex history.
6. Court record

II DIAGNOSIS

This is the working hypothesis of the cause or explanation of the symptoms or the problem and results from a careful analysis of all the data obtained It is not necessarily delayed until all the evidence is in, for guesses or hypotheses are actually being made and leads followed up at many stages, but the final diagnosis is not actually made until the evidence is in Possibly, the better statement would be that every guess or lead is followed until the worker is reasonably sure from the evidence that it is correct

III. TREATMENT

Out of the diagnosis grows the definite systematic treatment It often happens that the treatment shows that the diagnosis was not correct In this case we must go back for further investigation In one sense, the treatment may be considered as a step in the verification of the hypothesis, in another it is itself a guess or an hypothesis set up as a possible remedy that itself needs verification by the final step

IV FOLLOW-UP

It is very necessary to know the results of the treatment in order to check the accuracy of the diagnosis and to modify, if necessary, the treatment It also aids in later cases that may be similar in nature.

4. *The Case of Marie* —The following case, taken from a study of a certain high school, may serve to make clear certain parts of the case study method It is incomplete in many places and does not always follow the order shown in the outline It is, however, a good illustration of a case study carried on in an ordinary high school with practically no facilities for special investigation such as visiting teacher, psychologist, or psychia-

trist. It is the work of a regular, though not an ordinary, high-school teacher.

THE CASE OF MARIE GASPARRI[1]

1. *General Facts.*

Name	Marie Gasparri
Age	Thirteen
School	Washington High School
Grade	Second year, high school
Nationality	Italian
Health	Robust

2. *Problem*.—Failure at the end of her sophomore year in Washington High School

3. *Examination and Diagnosis.*—Dark, slender, light-gray eyes and curly brown hair—obviously a northern Italian type—quick, nervous movements, a penetrating and almost insolent gaze, precocious, coquettish, rebellious, in short, a destructive factor in any classroom Marie was an individual—interesting even though objectionable Unaffected by discipline, her work was rarely prepared, and never on time, replete with impudent caricatures and sketches—showing ability She was a child of divorced parents, continually traveling between the two, and alone, from early childhood, though well cared for, unwanted Her interests, however, centered around her paint box and her books She had never attended a school prior to high school. Her elementary education she received from a harassed French governess

Happy to enter high school, for she had never intermingled with children of her age and was friendless, she found the children unsympathetic and her teachers distant Beginning brilliantly in her freshman year, she successfully passed English, in which she did exceptionally well, Latin, easy for her Italian tongue, mathematics, barely; drawing, brilliantly, and history passably In her sophomore year her evident negligence and poised indifference to any sort of disciplinary measures antagonized her teachers . . . In every classroom she sketched away . . . Her entrance into a classroom was usually a cause for commotion among the boys For the whole second year her work was worthless She would have been dropped from the rolls if her I.Q , taken for statistical reasons, had not been exceptionally high (150, in fact) revealing her as a child of quite unusual ability

Her English teacher became especially interested in Marie. Going out of her way to walk home with her, she cajoled her into writing a theme Marie responded with a sketch of small town life, with frequent excerpts from "Main Street." Her purpose increased by the promise of unsuspected abilities revealed by this sketch, the teacher proceeded in the attempt to ferret out the child's trouble. She discovered that Marie lived with a negligent aunt in a large, gloomy, old house in that section of the town where the aristocracy once had dwelt She was highly sensitive and too

[1] A case reported by a graduate student

greatly individualized to respond to ordinary methods of approach, well bred but impulsive, either dangerously gay or disturbingly sad, affectionate, but with no outlet for her emotions. She was embittered and showed a surprising maturity Her mind was of an imaginative cast, she had misplaced her values and conceived of life as a miserable, farcical trick Thoroughly interested, the English teacher resolved to help Marie during the following year The summer vacation was about to begin Marie had failed utterly her Cæsar, English, History, Mathematics—in short, everything but her drawing

4 *Partial Treatment* —In the autumn Marie returned to school with an extravagant though tasteful wardrobe and continued with subjects repeated from the preceding year The English teacher made further advances and these were accepted by the girl She encouraged the child's art, and discovering that she had a predilection for music, arranged that Marie take music lessons When Marie's reticence had been overcome, the teacher permitted herself to remonstrate with her for her rebellious attitude

5 *Follow-up and Further Treatment* —Marie's work, under the encouragement of the English teacher, improved She still suffered from hypersensitiveness and covered it with her poised rebellion By the end of the year her grades were high and she was permitted to enter the junior year Marie's sense of humor was little developed The English teacher, by the frequent recounting of humorous anecdotes and inducing laughter at all possible times, convinced her that life was loads of fun if she'd only look She coaxed Marie to make friendships and to forget her irony, so that by her senior year Marie seemed a normal high school girl—still the individualist, but more amenable to discipline

6 *Result* —On graduation, encouraged by her English teacher and by her principal, who had come to take a strong interest in the girl, she went to a college in a large city, taking a major in art. Four years later she returned to her home town, a fine, well-developed type of creative artist

5 *The Value of the Case Method.*—In all problem cases in the school, whether of discipline, of adjustment to the school or to the teacher, of choice of studies, of choice of college or of occupation, case studies should be made as far as it is possible to do so. All relevant data that it is possible to secure should be obtained and recorded and this should be done *before* diagnosis and treatment. These case records should be carefully preserved in order that the case may be followed up and help given later if needed Teachers should be led to look upon every child as an individual who should be treated as far as possible by the case method of procedure.

QUESTIONS

1. To what extent are our thinking and our decisions affected by our emotions?

2 What part can the school play in securing normal emotional development?

3. What are the dangers and difficulties of home visits by teachers?

4 To what extent should the contacts between home and school be left to the visiting teacher?

5 How does the case method differ, if at all, from scientific research in other fields?

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CHAPTER XII

ASTROLOGY, PHRENOLOGY, PHYSIOGNOMY, GRAPHOLOGY, AND ALLIED METHODS OF INVESTIGATING THE INDIVIDUAL

In this chapter we shall consider the claims of certain widely advertised and somewhat alluring methods of securing information about individuals These methods are alluring because they claim to be able to list and classify types of individuals in such a way as to provide a quick and reliable method of discovering qualities of character and special aptitudes for certain occupations If this could be done, much time and money could obviously be saved and the process of guidance be much more sure. This is one of the reasons why so many people pay large sums of money to these practitioners for advice. It is estimated that well over $5,000,000 is spent each year in this way. The fortune teller and the astrologer never fail to secure a following Human nature is prone to follow anyone who claims to have a short-cut method to wealth, happiness, or success Anyone who can really do this deserves to have a following The question for determination is whether these methods are reliable

I ASTROLOGY

Probably one of the oldest methods still in use is that of astrology. Astrologists base their claim upon the influence of the sun, moon, and stars on human life, especially the influence of certain combinations of the heavenly bodies at the time of the birth of an individual

1 *The Claims of Astrology* —Given the year, the day, and the hour of birth, astrologers claim to be able to tell not only what your character and abilities are, but also what will happen to you at certain times. The early history of the race is full of instances showing belief in the influence of the heavenly bodies upon human life and upon nature in general Even now, many people are certain that the moon does exercise a positive influence upon the weather and upon the germination of seeds. We still speak of a "wet moon" and a "dry moon," and of the influence of the "dog star."

2 *The Question at Issue* —It would be rash, indeed, for anyone to say that the sun, moon, and stars have no influence upon

human life We know that they profoundly affect our lives in many ways Some astronomers still seem to be quite sure that sun spots have a great effect upon earth storms and possibly upon certain other climatic conditions. The question is not whether the heavenly bodies have such an influence but (1) how great and how specific this influence is and (2) how accurately we can determine in advance what this influence will be and what will be the effect of the influence.

3 *Evidence against Astrology* —This, then, becomes merely a question of fact, of evidence What are the facts? Has astrology proved its claims? We cannot here discuss in detail all the specific evidence but can merely suggest certain significant questions

a. Astrology has been practiced for many centuries—at least from the time of the Egyptians. If it were reliable, would we not have recorded sufficient evidences of its success to prove it? Outside of certain unreliable records, acknowledged to be more or less mythical and legendary, history records no instances where astrology has proved itself a reliable means of prognosis for individuals or for nations The oracle at Delphi and the Roman auguries have as just claims as has astrology Successful practice over so many centuries should have resulted in its general acceptance. Astrology is, at best, on no more solid ground than it was three thousand years ago as far as evidence of its efficiency is concerned.

b. It is also possible to make some judgment regarding its efficiency at the present time Astrological charts are carefully worked out and spread broadcast; offers to read character and to forecast events are readily given. It is not unusual for one to receive partial character readings from astrologers who secure in some way the date of birth of the recipient This is accompanied by the offer to make a complete reading for a stated sum of money, if the hour of the day, as well as the day, month, and year are given. These statements are usually couched in very general terms, are usually favorable, and do not hit the facts sufficiently well to warrant the acceptance of the method It is generally believed to be very unreliable and untrustworthy

II. Phrenology

1. *Basis of Phrenology* —Another widely advertised method is that of phrenology. This is based upon the belief that the

shape and size of the head and the configurations of the skull influence or reveal character This idea first came to the fore during the first decade of the past century. It was widely advertised and was accepted by many prominent men, among them Horace Mann Gall, who founded this method, studied the skulls of many men who were known to have certain characteristics, abilities, etc , and from the similarities thus discovered developed his system He charted the skull into regions which were supposed to represent certain specific brain functions or "faculties" He thus claimed, by an examination of the head of any individual, to be able to list his faculties and to give him advice regarding his future.

2 *The Claims of Phrenology*—Modern phrenology has gone far beyond its founder in the analysis of faculties and in its claims It now distinguishes temperaments as (1) vital temperament, (2) motive temperament, and (3) mental temperament It lists and locates at a particular place on the skull such faculties as amativeness, cautiousness, combativeness, firmness, form, size, language and causality In all, there are thirty-seven of these faculties named and located. It claims to reveal your character and your abilities, to give help in the choice of occupation, to assist in the regulation of diet, and to indicate the type of person whom you should marry. All of these are very important and phrenology would be a godsend if it could give us reliable information The question again is, has it proved itself to be reliable?

3 *Facts Disproving the Underlying Theory*—One method of approach is to examine the basis for the method It is based upon the theory that the mind is divided into faculties and that these faculties are definitely localized in the brain, that their location is approximately the same in all individuals Figure 20 is an attempt to show, in a rough way, the location of these faculties in contrast with the localization of brain function as commonly accepted.

In this chart, the human brain and the inclosing skull are shown *A* and *B* represent the location of a few of the faculties listed by the phrenologist Thus the language faculty is under the eye, veneration and firmness at the top of the head, destructiveness just over the ear, vitativeness behind and below the ear etc. The presence in large degree of any of these faculties is indicated by an enlargement at the point indicated; a small
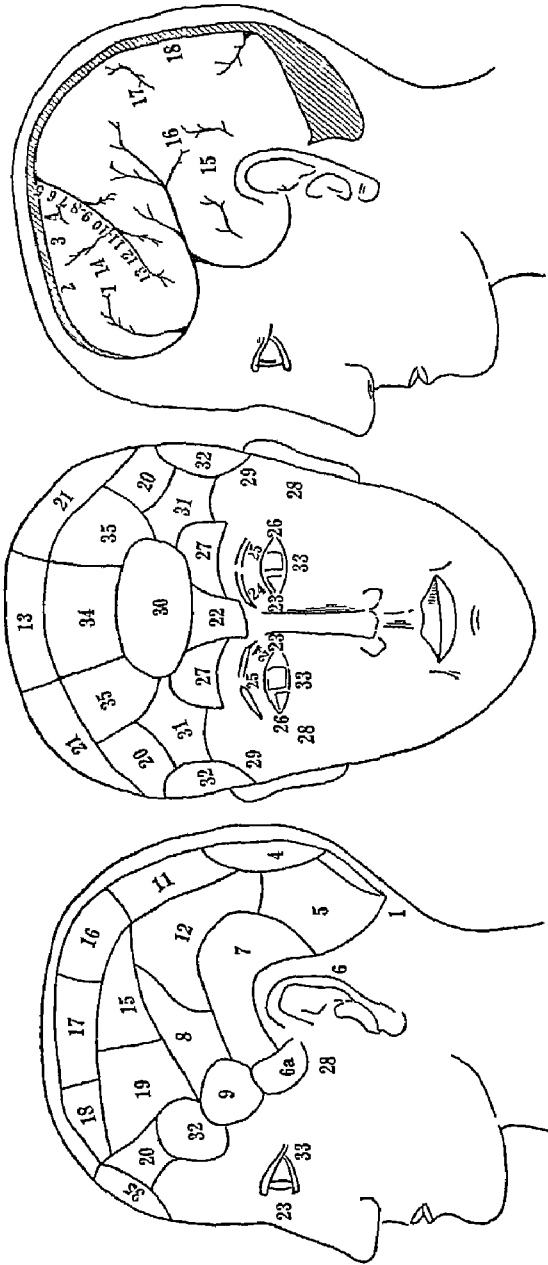
FIG 20 —Location of "faculties" contrasted with localization of brain function (The key to the numbers is given on page 209)

amount of the faculty or its entire absence is indicated by a depression. This is all very clear and very definite and should be capable of proof. Fortunately, psychology, surgery and anatomy, working together, have furnished us with fairly reliable information upon which to work in judging the accuracy of these statements There is localization of brain function, but it is of an entirely different character from that claimed by the phrenologists Faculties do not exist; there is nothing to indicate that parts of the brain represent the presence of anything like what the phrenologist calls a faculty. In Fig. 20, *C* shows the human brain and the location of some of the functions These charts indicate that the sensory area, to which the nerve impulses originating in the various sense organs come, is not adjacent to or directly connected by position with the motor area The sensory area, in general (15 to 18 in *C*) is behind and below the motor area (1 to 14 in *C*). The motor area, from which the nerve impulse goes to the muscles, is in front of and above the sensory area These areas are all connected by associative fibers so that coordination of action may take place, but the connection is by these associative fibers and not by position.

Let us now take one of the "faculties" shown in *A* and *B* and see how it would work out in *C*. The language faculty would, by its very nature, be a combination of seeing words, of hearing words, of writing words, of speaking words These are, in turn, made up of sensations and movements They are sensations of

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Key to Numbers in Fig 20

A and *B*		*C*
1 Amativeness	18 Wit	Motor Area
4. Adhesiveness	19. Imitation	1. Motor speech
5. Combativeness	20 Individuality	2. Writing speech
6. Destructiveness	21 Form	3 Head and eyes
6a Alimentativeness	22 Size	4. Toes
7 Secretiveness	23 Weight	5 Foot
8 Acquisitiveness	24. Color	6. Leg
9 Constructiveness	25 Locality	7. Thigh
10. Love of approbation	26. Number	8. Trunk
11. Cautiousness	27 Order	9 Shoulders
12 Benevolence	28 Eventuality	10. Arms
13 Conscientiousness	29 Time	11. Fingers
14 Firmness	30. Tune	12. Head
15 Hope	31 Language	13. Face
16 Wonder	32 Comparison	14 Hips
17 Ideality	33 Causality	Sense Area
		15 Hearing
		16. Auditory speech
		17. Visual speech
		18. Vision

hearing, of seeing, of touch, and of bodily sense, they also involve movements of the eyes, of the various parts of the throat and mouth, of the fingers, arm, and shoulder. To have a faculty of language and to have it located immediately under the eye, it would be necessary to have all these motor and sensory areas together under the eye. A glance at the diagram will show that this is impossible Not only are the sensory and motor areas separate, but the visual, auditory, and bodily sense areas are widely scattered According to many authorities, the motor area is still more definitely localized so that the places where the movements of the eyes, of the fingers, of the toes, of the arm, of the vocal organs, originate are each in a separate area They are all, as we have said, connected, but this connection is internal We can thus see clearly that the theory upon which phrenology is based is entirely false. There can be no such localization of faculties as this theory demands Bumps or depressions cannot mean the presence or the absence of certain so-called faculties.

4 *The Test of Time*—The second line of approach to the determination of the validity of phrenology is that of actual experience Phrenology has utterly failed to establish its claims by experimental methods. There is no collection of authenticated, reliable data, acceptable to disinterested investigators, upon which phrenologists can base their case This, considering the more than one hundred years since it was founded, should be sufficient proof that the theory is not correct. In the face of this lack of evidence it seems hardly worth while to present any further data to disprove the claims, although this can readily be done.

5 *Unreliability of Phrenology*—What has been said in no way proves that phrenologists do not sometimes diagnose correctly nor does it prove that they never do good There are many instances in which the phrenologist has correctly listed many of the characteristics and abilities of individuals. It is doubtful, however, whether the phrenologist depends entirely upon the configuration of the skull to draw his conclusions. A well-known psychologist once made an actual trial to see whether the phrenologist actually did "read the bumps" He did not shave for several days, put on old, ragged clothes, and presented a generally disreputable, dirty appearance when he first presented himself to the phrenologist He paid his money and had his character

read. He took the reading and suggestions with him A week or two after this, he again presented himself to the same man, but this time he was clean shaven, attired in neat, well-fitting clothing, and presented a generally attractive and prosperous appearance. Again he had his character read, but it was entirely different from the first reading, and the advice and suggestions were also quite different. It is true, this phrenologist may have been a charlatan, but such experiences have been too numerous to dismiss without consideration. It is quite probable that in many cases the phrenologist is honest and thinks he reads from the head, but is unconsciously influenced by general appearance and by the reactions of the subject being examined In any case, it is clear that we cannot depend upon phrenology to give us reliable data.

III. Physiognomy

1. *Basis for Physiognomy.*—The methods that rely upon anatomical structure for facts concerning individuals are many and varied They are more or less related to phrenology in some respects, but do not depend upon localization of brain function to the same extent. Probably the oldest of these is physiognomy, which was formulated by Lavater about 1775 It was based upon the assumption that qualities of mind were expressed in the face This method has been revived and greatly extended during the past twenty-five years and now has many firm advocates Their general beliefs are so similar and their methods so nearly alike that no attempt will be made to distinguish clearly between them. In general, they are based upon the theory that there are physical correlates for every mental state and that these physical correlates are constant, that, just as joy and fear clearly reveal themselves in facial expression, in voice and bodily action, so firmness, brutality, judgment, reasoning ability, and executive ability show themselves in more or less permanent ways in the structure of the body and in the various facial characteristics Variations in abilities, in temperament, and in general characteristics manifest themselves in texture of the skin, in color of eyes and hair, in shape of the chin, the nose, the mouth, in the profile, in the size and shape of hands and feet, and in a variety of other ways The claim of this theory to validity is based upon a study of hundreds of men and women over a period of many

years. Its advocates affirm that they have first found the characteristics of these individuals and have then charted the various parts of the anatomy of each, especially the parts of the head and face and have thus selected certain criteria that can be depended upon to reveal characteristics of people wherever they are met One system charts the face as well as the skull and allots to each "region" a special characteristic. Another depends more upon the convexity or concavity of the profile and upon texture of the skin. They all make much of combinations of anatomical features in the determination of characteristics

2. *Plausibility of the Claims.*—These methods have a greater appeal even than phrenology because everyone depends more or less upon the appearance of his fellows in judging character and in determining ability We speak of the pugnacious face, the broad, intellectual forehead, the sensitive nostrils, the artistic fingers and eyebrows, etc , etc. Again, there can be little doubt that what we are does tend to reveal itself in our outward appearance. Habitual cheerfulness results in lines on the face and set of the lips that reveal the disposition. We can usually distinguish the pessimist from the optimist. All these are matters of common experience. The authors of the methods of character analysis described above claim that they have merely refined our usual procedure and made it more scientific and certain If they have been able to do this, they surely have made a great contribution Actual experience with one of these systems has convinced me that many times the correct diagnosis has been made. Even the present occupation of men who were perfect strangers to the operator has been correctly given, not once but a number of times. The method sounds so plausible and so fully agrees with the experience of many that it is no wonder that it has so many strong adherents.

3. *Evidences of Success*—In discussing the evidences of its success, we should say that the founders of these systems claim to have followed thousands of cases that have been diagnosed by them and know that the method is reliable They have never presented this evidence to disinterested judges, however, for confirmation This, in itself, looks suspicious, but is not definite proof of its unreliability. Hull[1] has brought together

[1] HULL, CLARK L , Aptitude Testing, Yonkers-on-Hudson. World Book Company, 1928, pp 111–138

the results of many tests scientifically constructed and a number of experiments that bear directly upon the problem before us. Among the most important investigations were the following.

1. Judgments of character based on photographs
2. Judgments of practical intelligence based on photographs
3. Evidences of blonde and brunette coloring as signs of temperament.
4. Judgments based on seeing the subjects in person
5. Evidence as to significance of convex and concave profile
6. Dimensions of the head as signs of aptitude

All but one of these experiments showed nothing that could be relied upon as evidence of the prognostic value of the methods under consideration Usually low positive correlations were obtained, but the probable error was in all cases so large as to render the predictive value worthless This means that in many cases there was a clear and direct correspondence between the judgments or estimates of the different people regarding the trait or characteristic, but that the cases in which the judgments did not agree were so numerous that we cannot be sure that there would be any general agreement at all if a sufficiently large number of people were included in the experiment In some cases, even small negative correlations were found. Dimensions of the head seemed to offer possibilities of value, but even this was very slight. The number of subjects investigated in these experiments was small and it is barely possible that further experiments in a more extended scale will reverse the findings reported by Hull It is significant that all of the results point in the same direction—against the value of these methods It is still further significant that in no case has a promoter of one of these systems himself conducted such experiments Personal observation of the methods cannot fail to convince one that the operators are extremely clever and that very often, at least, they are thoroughly convinced of the validity of their methods. There is left in the mind of the impartial observer, however, the grave doubt whether the accuracy of the prognosis, when it proves to be accurate, is due to the system used or to the expertness of the operator in reading various signs of character not listed in the system. The operators are usually expert questioners and strong on the sympathetic side Whether this is the true explanation or not, there is strong probability that it accounts for some of the correct diagnoses.

Another point of considerable significance is that these practitioners do not usually claim to be able to judge the abilities and characteristics of immature persons as accurately as they can those of adults, this is because the shape of face and hands change and other bodily characteristics are altered with approaching maturity of body. Since our principal problem in guidance is with the immature, these methods, even if valid for adults, would give little help in predicting the future abilities of the students.

4 *Inaccuracy of the Fundamental Assumption* —Another even more serious objection is the doubt whether there are such things as types of temperament true of all people in all situations, whether there are general traits possessed by people and manifested in all situations regardless of the differences in the situations. This has already been fully discussed in Chaps IX and X and need not be repeated If this contention is true, there could be very little value in the methods that use physiological or anatomical signs as a basis for determining character.

IV. Graphology

1. *Basic Assumption* —Another widely advertised method of analysis is graphology or the "science" of handwriting analysis This bases its validity on the assumption that the characteristics, abilities, and aptitudes of people are revealed unmistakably in their handwriting. This method, also, has a basis in common experience and thus exercises a powerful appeal over many. What a person is, is shown to a greater or less extent by what he does and how he does it. The movements of the hand in writing must be determined to some degree by the thoughts, the feelings, the "temperament" of the individual. Further, experts can readily distinguish between the handwriting of different people, no matter how nearly alike the form of the letters may seem to the untrained observer. The problem is merely to determine the degree to which characteristics are revealed in the handwriting and whether this follows certain invariable laws.

2. *The Claims of Graphologists* —The claims of graphologists show clearly their belief that character, ability, and temperament are fully revealed in handwriting They claim to have developed the system by careful analysis and measurement of

thousands of specimens of the handwriting of men and women whose characters and abilities are known to all Some graphologists call themselves "personal efficiency experts" and do a thriving business Some advertisements of one of them are given to show the general character of their claims.

Have your character and personality analyzed Know your weak points Utilize your strong qualities Develop latent abilities Know the character of your friends and acquaintances. Make the most out of your life and opportunities.

The personal analysis service is graded in amount and costs as follows.

Rate—one-half cent per word.

1 Character cameos—100 words. Accurate sketches in miniature, 50 cents

2. Personal typewritten analysis—a more intimate characterization, 200 words, helpful and true, $1.

3. Descriptive (lesson) personal typewritten analysis—in greater detail with many signs pointed out and interpreted, 400 to 500 words or longer, as ordered, $2 to $5.

4 Thorough personal diagnosis with vocational résumé—800 to 1,000 words Send stamped envelope for particulars, $5.

5 Extended descriptive comparative personal diagnosis with vocational suggestions, 1,500 to 2,000 words, made from several scripts written over a period of years, $10.

One of these graphologists adds a further "astounding offer".

A Symposium Analysis

This is the most thorough self-examination possible to obtain. Your personal data is furnished to six of the foremost analysts in the United States and scientific analyses will be rendered by each one, working separately and independently of all the others. You will be carefully measured by astrology, numerology, psychometry, palmistry, phrenology, and graphology. This combination is worth one hundred dollars to any progressive man or woman This service, in combination offered exclusively by Mr. ——— for $50.

These samples reveal great cleverness in advertising and a commendable (?) confidence in the accuracy of the analyses. Certainly if the claims are valid no guidance worker can afford

to do without these invaluable aids to the discovery of character and aptitudes

3. *Factual Evidence.*—An examination of the analyses made by these men reveals the fact that, for the most part, they resort to very general statements that might apply to many different types of people and that they often so qualify their specific statements as to make it difficult to know what they do mean.

Fortunately, we have a few experiments, carefully conducted, that may help us in the evaluation of the accuracy of the method. Hull reports three of these.[1]

In 1906 Binet found that certain selected graphologists could distinguish sex fairly well from an examination of handwriting. General intelligence was also distinguished in the same way, although not with complete accuracy

Hull and Montgomery, in 1919, and Lois E Brown, in 1921, selected certain of the character traits commonly listed by graphologists as associated with traits of handwriting, that could be objectively measured. Some of these character traits were bashfulness, ambition, pride, forcefulness, perseverance, and reserve. The subjects were first rated on each of these character traits by a number of intimate friends. Next their handwriting was carefully analyzed. The results were entirely negative Nearly all the correlations were less than 0.20. None was even as high as 0 50. The largest correlation in any was −0.45 and the lowest +0.38, but in these cases the probable error was so great as to make the results untrustworthy. The results of these experiments do not warrant us in placing any confidence in the methods under consideration; they cast serious doubt upon their validity

While not denying that handwriting does reveal certain characteristics, we are forced to say that the evidence presented does not substantiate the claims of its advocates. We cannot depend upon graphology to give us worth-while, accurate data regarding individuals

The Danger in Short-cut Methods

1 *Distortion of Facts.*—The methods described in this chapter are fairly representative of the many systems of analysis founded

[1] Hull, Clark L, Aptitude Testing, Yonkers-on-Hudson: World Book Company, 1926, pp 147–151

on the theory of "signs" and based upon a more or less mystical interpretation of human life They each have some basis in fact, but we are forced by the evidence to say that they all have so distorted this factual basis and so magnified it that their conclusions are no longer reliable.

2. *Appeal of Advertisements.*—Reputable papers and magazines are full of cleverly worded advertisements of these so-called "experts," and there is a compelling appeal in their arguments Human nature is too prone to seek the short-cut process, in America especially We continually chase the rainbow, we never cease hoping to get something for nothing

3. *Necessity for Individual Study*—Every careful teacher and guidance worker should be on his guard against these methods Up to the present time, no reliable short-cut method has been discovered or devised to enable us to analyze the complexities of human character. We still are forced to the long and often tedious process of individual investigation. We should be profoundly thankful that this is true, for success in the field of guidance depends upon the degree to which we keep our eyes fixed upon the individual and his own peculiar needs.

QUESTIONS

1 What is the theory underlying phrenology?
2 In what respects has this been proved to be false?
3 Can a system be valid if the theory upon which it was founded is untrue?
4 How successful have "anatomical" methods of analysis been?
5 How generally have they been adopted?
6 What is the present status of the "science of graphology?"
7 What are the dangers in resort to short-cut methods?

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Chapter XIII

METHODS OF RECORDING THE RESULTS OF INVESTIGATIONS OF THE INDIVIDUAL

I. The Necessity for Adequate Records

In the last seven chapters, we have considered the kinds of facts about individuals that are significant and have discussed various methods by which these facts may be secured. But it is not sufficient merely to obtain facts We must also organize them and record them in such a way that they may be efficiently used. This is probably the least interesting part of the guidance work, but in many respects the most important. It is also the part that is most often neglected Strange as it may seem, few schools have any adequate records of students covering a period of years Even records of daily attendance and of scholarship are many times inefficiently recorded and more often destroyed after a few years, so that it is often impossible to get anything like a continuous record of a particular student over a period of years. Desirable changes in educational methods and in the general care of students are often delayed for years, and adequate personal guidance is rendered ineffective because we do not have records of important facts.

II General Principles for Recording Data

1 *The Necessity for Keeping Records.*—The first principle that should be stressed is—*record* facts. In general, any fact that is worth getting is worth recording Adequate guidance can be given only when all data that bear on the question at issue can be assembled and seen in perspective Teachers and principals often discover facts about students that are of supreme importance, but let them slip by because they do not take the time to record them or because no provision is made for their record No one should depend upon his memory for such facts. Our memory is most untrustworthy; we forget essential details and our impressions are too often modified by later experiences.

Even though a given teacher had a memory that recorded and retained details accurately over long periods, yet this would be of little use to the school or in the guidance of all the pupils. These facts must be available not only to one person but to all who need them to guide students.

2. *The Necessity for Recording Facts Only*—The second principle is—record *facts*. Great care should be exercised to have the records accurate No amount of statistical juggling can overcome inaccurate records. Conclusions are never more reliable than the data upon which they are founded. The dangers usually met with in connection with securing facts are described in Chap. VI. It is sufficient here to emphasize the necessity for recording the facts we get as accurately as possible.

3 *Usefulness the Criterion*—The third principle is—record only facts that will be used It is poor policy to adopt a very intricate and comprehensive system of records that takes a great amount of the time of teachers, counselors, principals, and clerks, when little attention is given to the way in which the facts recorded will be used When teachers are compelled to spend long hours in recording facts that mean nothing to them and which they think entirely useless, they are not as likely to be accurate in recording the facts as they would be if the facts recorded seemed vital to them. A good general policy, and one strictly in accord with modern educational theory, is to develop in teachers the feeling of the value of the facts before they are required to record them This cannot always be followed out, for sometimes the only way to convince teachers of the value of certain facts is to have them recorded and then to show them how useful they are In general, it is much better to build up the system of records at the same time that the sense of value of the facts recorded is being developed Better a few facts that are used than a mass of material left on the shelves to gather dust and to take up space badly needed for other things This implies that forms and records will often vary with the school and with the stage of development of the same school Large schools, well equipped with clerical assistance and having a staff of special workers will have more need for elaborate systems than will small schools where all of this work must be done after school hours by the principal or the teachers. Each school must decide for itself what records can be effectively used.

4 *Economy of Space*—The fourth principle is—record facts in such a way that a maximum of data can be recorded in a minimum of space Records of any individual to be valuable must cover a number of years, and accordingly must be condensed. Before adopting any system of records, a school should give much time to a careful study of the systems in use in other schools, especially with a view to economy of space. As far as possible, the permanent record should be on one card Bulky material is likely to get lost or misplaced and, even when carefully preserved, takes up so much space that its value is greatly diminished. While emphasizing this principle, we must be careful not to condense to the point of confusion Sometimes a system of records is devised with great care and condensed into a very small space, code numbers or signs are used in place of descriptions. This works well so long as the ones who use the records remember accurately the significance of the codes, but when they do not, great confusion arises It is much better to use very simple and easily understood codes if they are used at all Accuracy in use should never be sacrificed to reduction of space in filing

5 *Arrangement of Data to Show Significance*—The fifth principle is—record facts in such a way that the significance of the data may be seen quickly It is, of course, not always possible to throw all significant facts together The one using the blanks should carefully examine all parts of it It is often possible, however, to use the graphical method and to show the complete history of an individual for a considerable period of years in a very small space. Data regarding growth in height and weight, progress in school, results of examinations, health history, etc., may be recorded in this way. An admirable example of such a system is that devised by the American Council on Education for use in high school and college. This is shown on page 230 Here, not only can the entire history of the student be seen at a glance, but all significant data for any given year may be seen and compared This blank also well illustrates the principles laid down under 4, for the material is condensed and only codes that are simple and easily remembered and quickly verifiable are used.

6. *Assembly of Data Regarding an Individual*—The sixth principle is—keep all facts regarding an individual together. The

value of this is almost too evident to need discussion, but it is very frequently violated. Either through lack of cooperation or laziness of those who keep records, or both, those who wish to learn the facts about students must spend hours of time going from one place to another, meeting all sorts of opposition, intentional and unintentional, before the data can be obtained. It is true that, in a large system, the teacher, the principal, the medical examiner, the psychiatrist, the attendance officer, and the visiting teacher each must have his own records in his own office. But we are here speaking of the records that are to be used for guidance purposes. To make the facts obtained by these different agencies available, there should be provision made for sorting out those that have permanent value and that are of the most significance and placing them on a single card or folder. Here the record devised by the American Council and reproduced on page 230 is suggestive The entire space of the folder, approximately 11 by 17 inches, is utilized on both sides It is also possible to place inside the folder cards or sheets containing additional material. This is especially valuable for the small school.

III. Cumulative Records

The principles laid down presuppose and emphasize the value of the cumulative record Isolated facts mean little and are often unreliable, but, when taken all together and seen in their mutual relationships, they may be much more valid and reliable. What a person does today has its greatest significance only when seen in connection with what he has done previously. A student receives a mark of *B* in algebra for the month of March This gives some indication of what he actually accomplished during that month, but it tells us little regarding what he can do or what he should be encouraged to do. His marks for each month from September to March help us to gage his progress; if we knew his record in other studies, it would be still more helpful If we also knew something about what he was doing in athletics or in other school activities, what the conditions in his home were, what other interests he had—all these would be still more valuable. If, in addition to this, we had all of these data for his entire school life from the first grade to the ninth, we would be able to understand much better what his mark in algebra for the month of March really signified Progressive schools all over the country have adopted, in principle, the cumulative

HIGH SCHOOL—PERMANENT RECORD

Name . . . . Sex . . . . Address . . . .

Name of Parent or Guardian . . . . Occupation . . . .

Date of Birth . . . . of Vaccination . . . . of Entry . . . . of Leaving . . . .

Date of Graduation . . . . Birthplace . . . . Date of Birth . . . . Age . . . .
Mo Da Yr. Yrs Mos.

Admission secured by Credentials . . . . Admitted from . . . .

State Diploma . . . . Promotion . . . . Examination . . . .

Intention upon leaving this school. Business . . . . Trade . . . . Profession . . . . School . . . .

Health . . . . Physical Difficulty . . . . Credits . . . .

REMARKS.

GRADE RECORD

SUBJECT	Year	Year	Year	SUBJECT	Year	Year	Year
Reading				Home Econ			
Spelling				Agriculture			
Writing				Man Train			
Arithmetic							
Grammar				Wks of Sch			
Geography				Days Due			
Physiology				Days Absent			
History-Civics				Times Tardy			

NOTE
A—Excellent, 90 to 100.
B—Good, 80 to 89
C—Passing, 70 to 79
Credits from other schools in red ink.
Credits by examination marked X; Incomplete, I, Dropped, D, Failed F

Reverse Side

Name *Course*

SUBJECT	Yr Sem			Yr. Sem			Yr Sem			Yr Sem			Yr Sem			Total
	1	2	Cr	1	2	Cr	1	2	Cr	1	2	Cr	1	2	Cr	
En-Comp-Rhet																
Am Lit																
Eng Lit																
Com Eng																
Algebra																
Geometry																
Latin																
French																
Spanish																
Gen Science																
Physiology																
Botany																
Biology																
Zoology																
Agriculture																
Physics																
Chemistry																
History Anc																
History Mod																
History U S																
Civics																
Economics																
Comm'l Law																
Comm'l Geog																
Comm'l Arith																
Penmanship																

SUBJECT	Yr Sem			Yr Sem			Yr Sem			Yr Sem			Yr Sem			Total
	1	2	Cr	1	2	Cr	1	2	Cr	1	2	Cr	1	2	Cr	
Bookkeeping																
Stenography																
Typing																
Cooking																
Sewing																
Manual Training																
Art																
Orchestra																
Glee Club																
Citizenship																
Industry																
Punctuality																
Loyalty																
Reliability																
Health																
Home Conditions																
School Activities																
Weeks of School																
Days Due																
Days Absent																
Times Tardy																
Total Credits																

record idea, and are putting it into practice as rapidly as they can find means to do it

IV. Forms of Cards and Record Blanks

1 *Variability of Forms*—The cards and record blanks used are extremely variable. Each school seems to have a system of its own The cards used vary in size from the small 3- by 5-inch library card to large ones, 8½- by 11-inches or even larger Forms suitable for different data and for different uses are suggested in the bibliography at the end of this chapter

2. *A Simple Form*—One of the simple forms is given in Chap. VI, page 101 Another similar one is given on pages 222–223. This gives the usual data regarding age, address, name and occupation of parent, and certain facts regarding admission to the school, health, and date of graduating The reverse side gives space for the scholastic record by semesters Nearly all the data called for by this blank are easily verifiable and may be made very accurate. However, much desirable information that any school can easily obtain is omitted

3 *Junior-high-school Card*—The Student Vocational Analysis Master Sheet used by the Alexander Hamilton Intermediate School, Seattle, is conveniently arranged and complete enough for ordinary purposes

Student Vocational Analysis Master Sheet

Alexander Hamilton Intermediate School, Seattle, Wash

Name Roll
Grade Age
Address Telephone

I Family Background

1 Nationality of father mother
2 Number in family sisters brothers
3 Vocation of father grandfather
4. " " mother grandmother
5 " " brothers sisters
6 Particularly gifted ancestors
7. Education of father Mother
8 Type of parental relation·
divorced separated stepparents
foster home normal
parents living or dead
1 Schools previously attended
2. Scholarship there Citizenship
3 Attendance

II Intermediate School Report

Academic Work	*Power of Expression and Conduct*
Rating	Estimate
English	Response
Mathematics	Application
Geog-Hist-Civics	Initiation
Reading-Lit.	Leadership
Man Tr	Self-reliance
Art	Self-control
Phys. Ed.	Politeness
Music	Neatness
Handwriting	Attitude toward school
Science	" " work
Foreign Lang.	Social adaptation in room
Days absent	Special problem
Times tardy	

III Standardized Test Score

Binet	C Age
Otis	M Age
Ill	Educ. Age

IV. Health History

1 Childhood diseases
2. Time lost through sickness
3 Family health record

V Physical Examination Data

1. Height	4 Hearing
2 Weight	5. Teeth
3 Vision	6 Sex-maturity

VI. Moral Qualities

1. Honesty
2. Personal habits
3 Promptness
4. Tactfulness
5 Cleanliness of mind
6 Religious
7 Persevering
8 Personal characteristics necessary to success
9 Weakness or temptation apt to hinder career

VII. Home Visit Report

Date	Name of parent
Condition of home	Neighborhood environment
Heat	
Light	
No. of rooms	Sleeping rooms?
Family income	
Attitude toward school	
Parents ambition for child	

VIII. Social Efficiency
1 Club membership
2 Offices held
3 Ability to work harmoniously with others

IX. Vocational Experience
Positions held
Place
Wages
Time

X. Adjustment

XI Results

4 *The Baltimore Packet Record System* —A very compact and useful cumulative record is used in Baltimore. This consists of a packet of cards for each pupil. These cards are approximately 4 by 6 inches in size and are enclosed in a folder of the same size so that it is convenient for filing The statement on the outside of the folder indicates the nature of the packet and the general plan used.

BALTIMORE PACKET RECORD SYSTEM
Pupil's School History

The BALTIMORE PACKET SYSTEM is designed to provide in a single unit a comprehensive cumulative history of each pupil's school career It includes Pupil's Record Card, Medical Card, Mental Test Card, and Social Workers' Card Special reports becoming available from time to time, such as Vocational Guidance Card, Psychiatrist's Card, etc , are to be placed in this packet.

Note to Principal—This packet is to follow pupil by mail from school to school

Designed at Bureau of Educational Research, Baltimore, Md

In addition to the special cards mentioned above there are cards for "Try-out Information," for "Elimination," and for "Vocational Information." Each card contains many items of information appropriate to the purpose. When these items called for are carefully collected and recorded, the school has an unusually complete and satisfactory description of the student As in all cases of records great care must be taken to secure information that is accurate and reliable. Unless this is done no accumulation of cards or items on the cards can possibly be relied upon for guidance.

5. *Forms Recommended by National Association of Secondary-school Principals.*—Special attention is called to the forms

NAME OF SCHOOL

Conference Data and Records

Last Name First Name Middle Name	Male Female	White Negro Mongolian	Language Spoken in Home	Address (Pencil)	Check in Pencil Resident Non-resident	Birth Place Date	Check authority for birth data [ ] Birth Certificate [ ] Church Record [ ] Hospital Record [ ] Passport [ ] Mother's Statement [ ] Bible [ ] Father's Statement [ ] Oath

Name of Parent or Guardian	Place of Birth	Nationality	Home Address (Pencil)	Occupation	Business Address (Pencil)	Telephone No (Pencil)
Father	F	F	F	F	F	F
Mother Maiden Name	M	M	M	M	M	M

Date and Grade Entered	Test given Date Rough Score I-Q	Retarded Normal Accelerated	Last School Attended Address	Permanent Withdrawal Date	Cause	Units Transferred Units Earned

	Age	Date Graduated	Honors	Check when leaving School	Scholastic Preparation Poor, Fair, Good, Excel.	Seriousness of Purpose Poor, Fair Good, Excel.	Personality Poor, Fair, Good, Excel.	Personal Appearance Poor, Fair, Good, Excel.
Curriculum Entered	Years Months	Number in Class	Scholarships					
Curriculum Completed	Age Years Months	Rank	Awards		Intellectual Promise Poor, Fair, Good, Excel.	Personal Character Poor, Fair, Good, Excel.	Leadership Poor, Fair, Good, Excel.	Health and Vigor Poor, Fair, Good, Excel.

Transfer Place Date Name of school or place of work	Special Interests and Abilities	Notable Physical Defects	Religious Preference

Home Economic Status Social Conditions	Number in Family Pencil	Number Employed M F	Health Defects of Home

INTERVIEWS OR CONFERENCES (Enter serious discipline in red ink)

Date	Interview or Letter	Pupil	Parent	Object	School Official	Results

Personal Record
Social Activities and Characteristics

NAME OF SCHOOL

Last Name	First Name	Middle Name	Address	Male Female	White Negro Mongolian	Nationality	Birth Place	Date	Parent or Guardian Address

RECORD OF SOCIAL ACTIVITIES, CHARACTERISTICS, HABITS, ETC
Check Membership V. Abbreviate office held Indicate Point of Value of Credit

Date Term Ending														
Activities or Organizations														
School Activities														
Class Organizations														
Subject Societies														
Athletic Activities														

CHARACTER RATING

Record traits on 5 point scale Average 3, above average 4, far above average 5, below average 2, far below average 1 Circle numbers and join by vertical graph

Rated by														
Date of Term Ending														
Honesty and Truthfulness	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Courage, Moral and Physical	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Courtesy and Generosity	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Perseverance and Industry	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Obedience and Loyalty	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Leadership and Initiative	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Neatness and Orderliness	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Cooperation and Friendship	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Promptness and Dependability	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Thrift and Economy	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345
Personality and Appearance	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345	12345

Habits or Characteristics likely to hinder success

of the Committee of Secondary School Principals for 1928.[1] This gives suggested forms for recording different types of data. The following general forms are given:

a. Cumulative Scholarship Record—This gives the usual information regarding scholastic marks in various subjects by semesters, the names of the home room teachers, and a number of other useful facts

b Conference Data and Records—This is so important and the data noted are so significant that it is given on page 227

The first part contains data that can be obtained mostly from the school records. Some, however, as personal appearance, personality, and special interests, can usually be found only by personal interview, although here, also, will be found a place where the personal estimate of the various classroom teachers will be valuable The second part is a record of the various conferences with students and with parents This blank is a blank of special help to the counselor.

c. Personal Record—The data called for in this section of the blanks are more personal and more subjective than the data in the blanks already described It contains material that is extremely valuable when properly used. The forms are reproduced here in order that the data and the arrangement of items may be seen.

d. Record of Tests—Intelligence, achievement, and prognostic tests.

e. Adjustment Record.—Course or curriculum changes.

f. Placement Record—To whom recommended, by whom employed, follow-up record.

g. Health and Physical Record—This includes some facts in the health history of the family; a record of diseases contracted and the dates, when possible; records of successful vaccination or immunization; record of communications to parents regarding physical defects of children; the physical record of the student throughout his school life.

6 *The American Council Blank*—The blank devised by the American Council on Education is reproduced entire on pages 230 and 231 as an example of a form that is desirable and practical

[1] NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS, Committee on Guidance, Guidance in Secondary Schools, *Bulletin* No 19, Cicero, Ill, January, 1928, pp 72–78.

1	Able	Andrew	W		4-1 12 Austin, Texas	(M) F	(W) C	M, S
	LAST NAME	FIRST NAME	MIDDLE NAME	NICK NAME	DATE AND PLACE OF BIRTH	SEX	COLOR	MARRIED?

2 PREFERENCE MEMBERSHIP — RELIGION Prot. — COLLEGE SOCIAL FRATERNITY — NAME OF HIGH SCHOOL LAST ATTENDED — TYPE — GRADUATED? YES NO — DATE — H.S. RANK — INDEX NUMBER AND LETTERS

3 YEAR		1925	1926	1927	1928	1929
4 AGE		16	17	18	19	20
5	H.S. RECORD	1 2 3 4	5 6 7 8	9 10 11 12	13 14 15 16	17 18 19 20 21 22

6–15 ACHIEVEMENT TESTS AND SCHOOL MARKS — ● STANDARDIZED TESTS, ○ LETTER GRADES, ◉ HEIGHT AND WEIGHT, ● LOCAL PERCENTILES — PERCENTILES — GRADES

Scale: 98 A; A−; 93 95; B+; 84 90; B; B−; 69 85; C+; 60 80; C; 31 75; C−; 16 70; D; 7 65; F; 0; F

Hand Writing
Motor Coörd
Steng
Manual Tr
Wt
Gen Sci
English
Ht
French
Algebra
Geom
Biology
Spanish
Geom
G
Chem
Phys
Engl
Chem
S S
Alg
Int
Am. Hist.
Europ. Hist
Chem
Eng
Sci
Math
Hist
Engl
Fr
Sp
Phys
Geom
Alg

PHOTO

16–23 COURSES TAKEN, CATALOG NUMBER, UNITS OF CREDIT

24 DIRECT PUNCH

25 ADVISERS	A H Smith	A. H. Smith	A. H. Smith	A. H. Smith	
26 NAMES OF COLLEGES	Kent High School	Kent High School	Kent High School	Kent High School	Osceola College
27 REASONS FOR LEAVING					
28 IRREGULARITIES IN COURSE					

		1925	1926	1927	1928	1929
29 YEAR		1925	1926	1927	1928	1929
30 AGE						
31 NOTABLE ACCOMPLISHMENTS UNUSUAL EXPERIENCES			Local Swimming Champion	Aug 15 Life Saving Medal		
32 CLUBS, FRATERNITIES OFFICES				Class President	Class President	
33 EXTRA CURRICULAR EXPERIENCES	ATHLETIC	F S	F S S	F S S	F Capt. 2nd Team S	
34	HOURS A WEEK					
35	NON-ATHLETIC	Boy Scout	Freshman Counsellor, Boy Scout	Freshman Counsellor, Scout Leader, Stud. Rep. Y.M.C.A.	Freshman Counsellor, Scout Leader, Stud. Rep. Y.M.C.A.	
36	HOURS A WEEK					
37 VOCATIONAL EXPERIENCES	TYPE	Grocery Delivery Boy	Clerk in Groc Store	Desk Clerk Y M C.A; Life Guard	Ass't Athletic Director Y.M.C.A.	
38	DURATION			3 mos.		
39	WEEKLY PAY	$5	$7.50	$12; $16	$20	
40	HOURS A WEEK			20		
41 SUPPORT OF SELF AND DEPENDENTS						
42 LOANS AND SCHOLARSHIPS						
43 STUDY CONDITIONS AND HOURS OF STUDY A WEEK						
44 SUMMER EXPERIENCES		Boy Scout Camp	Counsellor Boy Scout Camp	Life Guard Boy Scout Camp		
45 EDUCATIONAL PLANS		L A	L A.	L A		
46 EDUCATIONAL SUGGESTIONS		L A	L A	L A		
47 VOCATIONAL AND PROFESSIONAL PREFERENCES		Doctor or Banker or Editor	Doctor or Banker or Editor	Doctor or Banker or Editor		
48 INTERESTS REPORTED				Boys Club Work	Athletics	
49 PHYSICAL DISABILITIES						
50 HEALTH		+	+	+	Chronic Tonsilitis	Acute Tonsilities
51 MENTAL HEALTH						
52 SOCIAL ADJUSTMENTS AND HOME CONDITIONS		Leader	Popular	Leader especially with younger boys		
53 COMMUTING TIME HOURS A WEEK						

54 STUDENTS ADDRESSES
H = HOME
S = SCHOOL
T = TELEPHONE

PERSONALITY RATINGS

55	+2	Reliability, Personality, Leadership, Industry } o	Leadership, Personality, Initiative, Popularity } o	Leadership, Sense of Honor, Reliability, Industry } o
56	+1	Scholarship o	Scholarship o	Scholarship o
57	0			
58	−1			
59	−2			

PERSONALITY MEASUREMENTS
60 NAMES OF TESTS USED

	NAME	HEALTH	RELIGION	DECEASED DATE	PLACE OF BIRTH	[illegible]	EDUCATION DEGREE AND KIND	OCCUPATIONS	ADDRESSES	TEL.
61	FATHER George Able	Good	Methodist		Texas			"Man about town" Chore man		
62	MOTHER Mary Able	Good	Methodist		Texas			Boarding House	Austin, Texas	
63	STEP PARENT									
64	GUARDIAN									

65 NUMBER OF BROTHERS OLDER	NUMBER YOUNGER	NUMBER OF SISTERS OLDER	NUMBER YOUNGER
66 NUMBER WHO HAVE ATTENDED COLLEGE			
67 THEIR OCCUPATIONS			
68 LANGUAGE SPOKEN IN THE HOME BEFORE 16 AFTER 16	TYPE OF HOME COMMUNITY BEFORE 16 AFTER 16		IF PARENTS SEPARATED GIVE DATE

AMERICAN COUNCIL ON EDUCATION CUMULATIVE RECORD FOLDER FOR COLLEGE STUDENTS.

Notes

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To provide greater definiteness the record of a boy, Andrew Able, is also given

A careful study of this blank will show the great value for guidance of the facts obtained and especially of the method of recording these facts It is especially helpful because the facts as recorded are not essentially different from those that are available in all schools Here we see a boy, Andrew Able, of native parents, rather poor but respectable He entered high school when he was 16. His I Q. was 80, as evidenced by a mental test given when he was 15. His height and weight record is not unusual He was quite superior in handwriting, in general muscular control, and in manual training His marks in the various school subjects steadily declined to his junior year, but as suddenly went up in his senior year. He was uniformly below average in standardized tests except the Stenquist Test. As indicated in column 27, he went to college but made a very poor record in all his work. He had leadership ability and was rated high in sense of responsibility and reliability. He was interested in Boy Scouts, in athletics, and was especially expert in swimming During his junior year he was given a life-saving medal for saving a person's life It will be noticed that this is coincident with certain elections to office and especially with his sudden rise in marks Other facts recorded, but not shown here, indicate that he was made much of by his mates; by his townspeople he was justly regarded as a hero He was given a scholarship to attend college. When he took the entrance examinations, he failed. In the record of his health, it is noted that he had attacks of acute tonsillitis at this time Because of this and because of the recommendation of his principal, he was admitted to college. His record there speaks for itself He should never have been advised to go to college. His I.Q. of 80 and his entire school record clearly indicate that such a course of action was very unwise. If his counselor had had such an array of facts, thus assembled, before him, the advice given would probably have been different and the failure of the boy in college have been avoided This failure may have seriously and disastrously affected the whole after-life of the boy.

Most schools could not only obtain all the facts here recorded, but add to them much regarding the elementary school work and early life experiences, conditions of the home, and many other

facts. Such cumulative records should be made a part of every school system.

The Pennsylvania State Department of Education has recently constructed a cumulative record blank based upon that of the American Council but somewhat better adapted to the work of the typical high school These will soon be in general use in the schools of Pennsylvania and should provide the basis for effective guidance.

QUESTIONS

1 What principles should determine the kind of records to be used in your school?

2 What is the peculiar value of the cumulative record blanks?

3 What dangers are to be avoided in recording facts?

4 What facts about students should be made a part of the permanent records of the school?

REFERENCES

1 JOHNSON, F. W Administration and Supervision of the High School, Boston. Ginn and Company, 1926, pp. 246–278

2 NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS, Committee on Guidance, Guidance in Secondary Schools, *Bulletin* No. 19, Cicero, Ill, January, 1928, pp 68–78.

3 MCALLISTER, A. J., and OTIS, A. S. Child Accounting Practice, A Manual of Child Accounting Technique, Yonkers-on-Hudson World Book Company, 1927, Secs 3 and 4.

4 RAND-KARDEX SERVICE High School Administration, Tonawanda, N Y · Rand-Kardex Service Corporation, 1926

5 REAVIS, W C. Pupil Adjustment, New York· D. C. Heath and Company, 1926, pp. 324–341.

6. TOUTON, F. C, and STRUTHERS, A B. Junior High School Procedure, Boston Ginn and Company, 1926, Chap XIX.

7. YAWMAN and ERBE Record Systems for Schools, Rochester, N. Y. Yawman and Erbe Manufacturing Company, 1924

Chapter XIV

METHODS OF SECURING FACTS ABOUT GENERAL CONDITIONS OF SCHOOL ATTENDANCE

There are some facts of a more or less general nature that are essential to any consideration of guidance These relate to attendance at school and to conditions under which minors are allowed to work

1. Compulsory Attendance Laws

1 *Importance of Facts Regarding Attendance Laws*—Compulsory attendance laws are of fundamental importance not only in relation to the study of educational opportunities, but also in relation to the consideration of occupational choices. Copies of such laws should be in the hands of every teacher, and the exact nature of the provisions of the laws should be understood by everyone who has anything to do with the guidance of pupils This is especially important in the sixth, seventh, and eighth grades Not only should the laws of the state be known, but the general conditions and the tendencies in the country as a whole should be noted An excellent digest of the compulsory attendance laws for the various states has been compiled by the United States Bureau of Education [1]

A few of the most important facts will be given in the form of tables for ready reference.

2 *Age Limits for Attendance*—Table XXX shows the age limits for attendance in the country as a whole.

All states require attendance at school at least between the ages of eight and fourteen. Two states require attendance at six, and five states require attendance until eighteen As will be seen in Table XXXIII, most states where attendance is required beyond the age of fifteen or sixteen make provision

[1] Keesecker, Ward W., Laws Relating to Compulsory Education, *U. S Bureau of Education, Bulletin* 1928, No 20, Washington Government Printing Office.

TABLE XXX.—AGE LIMITS FOR REGULAR SCHOOL ATTENDANCE

Ages	Number of states	Ages	Number of states
7–16	20	6–16	1
8–16	10	6–18	1
7–17	4	9–15	1
8–14	4	8–17	1
8–18	3	7–15	2
7–14	1		
7–18	1	.. ..	49

for exemptions for those engaged in work. The table also shows that twenty-one states require nine years of school attendance; twelve states require eight years; one state requires twelve years, and one state requires eleven years of attendance

3. *Length of Required Attendance*—Table XXXI shows the length of term in months required in different states

TABLE XXXI.—MINIMUM TERM OF REQUIRED ATTENDANCE

Term in months	Number of states	Term in months	Number of states
9½	1	5	1
9	8	4	2
8	18	3	1
7	11	None	1
6	6	.	49

Thirty-eight states, then, require at least seven months of schooling each year.

4. *Amount of Education Necessary*—Table XXXII gives, for the various states, the minimum school grade required for exemption from the requirements of school attendance

TABLE XXXII.—MINIMUM AMOUNT OF EDUCATION NECESSARY TO EXEMPT FROM SCHOOL ATTENDANCE

Amount of Education	Number of States
High school	4
Elementary school	39
Not specified	6
Total . .	49

This indicates the required minimum education only in a general way. It really indicates merely grade in school attained, not scholastic attainment. Some pupils in the sixth grade have not, in reality, attained more than third-grade standards in the fundamentals.

5. *Education Necessary for Labor Permits*—In Table XXXIII, the requirements of the states are shown with regard to the amount of education required for labor permits

TABLE XXXIII—MINIMUM AMOUNT OF EDUCATION NECESSARY FOR LABOR PERMITS

Amount of Education	Number of States
Eighth grade	17
Seventh grade	4
Sixth grade	8
Fifth grade	3
Fourth grade	2
Ability to read and write	8
None	7
Total	49

Tables XXXII and XXXIII should be taken together, for while four states require the completion of a high school course before children are exempt from school attendance, as a matter of fact, in the majority of states, they may be exempt from attendance at the regular school if they have completed the sixth grade There are also a number of other exemptions, so that in many states the school authorities are given large discretionary powers of exemption.

6. *General Tendencies.*—Perhaps these tendencies, noted by Keesecker, have the most significance:

1 To lengthen the period of compulsory education by making it effective at an earlier and to a later age The establishment of kindergartens and compulsory attendance for part-time continuation, or evening schools are, in part, an expression of this tendency

2 To increase the annual required school attendance

3 To extend the compulsory provisions to include various handicapped children; also to provide parental schools for delinquents

4 To require more education for exemption and for labor permits

5 To require public relief to indigent children and subject them more to the attendance law.

6 To provide transportation for children not living within the usual walking distance from school

The period of the depression, while temporarily reducing the opportunities for education in many sections on account of lack of funds, has increased the tendencies here noted.

II. Child Labor Laws

1. *Importance of Child Labor Laws.*—The provisions of law relating to the conditions of labor for minors are also very important, both when considering the choice of schools and when considering the choice of occupations It often happens that a boy would like to leave school and enter a certain occupation, but the laws will not allow him to enter that particular occupation Hence, the problem becomes one of the choice of a school or of a course rather than the choice of an occupation Child labor laws are often somewhat technical and complex and should be so analyzed by school officials as to make clear their essential features and so arranged that they can readily be understood by teachers, parents, and pupils. This is usually the task of the principal or of the special guidance worker. Copies of such laws are easily obtained and should be kept where they can be used Teachers, as well as parents, are too often completely ignorant of the provisions of such laws

2 *General Provisions of Child Labor Laws.*—Child labor laws vary greatly in different states, but relate, as a rule, to (1) the limitation of daily and weekly hours of labor and to night work; (2) the imposition of certain requirements to be met by applicants for working certificates, such as the completion of a certain grade at school and evidences of physical fitness; (3) the prohibition of occupations dangerous to life or limb, health and morals Such laws should, and usually do, correspond with the school attendance laws.

3 *Standards Set by National Child Labor Committee.*—The National Child Labor Committee has steadily worked for improvement in the child labor laws of the country and has formulated a set of legislative standards that show very clearly the conditions thought desirable. They also show the tendencies in legislation

NATIONAL COMMITTEE STANDARDS[1]

I. No child under fourteen years of age to be employed, permitted, or suffered to work at any gainful occupation except in domestic service or agriculture.

II No child under sixteen years of age to be employed, permitted, or suffered to work

1 At any work known and declared to be dangerous, injurious or hazardous for children under sixteen years of age Places and occupations known to be dangerous or hazardous for children under sixteen years of age should be enumerated in the law, but authority should be delegated to some state board or commission to extend the list
2 After 7 p. m or before 6 a m
3 For more than 8 hours a day or 6 days or 48 hours a week
4. Or unless the employer procures and has on file a work permit issued by a proper school official upon the following conditions, except that no work permit is to be required for employment in domestic service or agriculture.
   a A promise of employment by the prospective employer showing the exact nature of the work
   b Legal evidence, documentary wherever possible, that the child is of legal age for that specific employment.
   c Evidence that the child has completed the eighth grade of the public school course or its equivalent If all other requirements are complied with, this requirement should be waived during the time when the public school of the district in which the child resides is not in session, a special vacation work permit being issued
   d A statement by an authorized physician showing that upon examination he finds the child of such development and in such state of health as make him physically fit for that special employment

III No child under eighteen years of age to be employed, permitted or suffered to work at any occupation or in any place known and declared to be dangerous, injurious, or hazardous for children under eighteen years of age Places and occupations known to be dangerous or hazardous for children under eighteen years of age should be enumerated in the law, but authority should be delegated to some state board or commission to extend the list.

4 *Prevalence of Child Labor.*—In spite of the efforts of those who oppose child labor, the Census of 1920 showed that over a million children between the ages of ten and fifteen were gainfully employed, over half of these on the farms or in kindred agricultural pursuits The industrial and economic changes

[1] *The American Child,* 8 4, February, 1926

described in Chap. I were powerful factors in the reduction of child labor in the decade 1920–1930. The Census of 1930 reported only children between the ages of ten and fifteen engaged in gainful employment Since that time, the number has been still further reduced The changes in the status of young people gainfully employed have been so great and the practices in different sections so varied as to emphasize to those concerned with guidance the value of securing the exact provisions of child labor and school attendance laws in their state and city and of investigating carefully the amount and character of child labor in their particular locality.

III Elimination and Retention

1. *The Value of Facts of Elimination*—The general facts of retention and elimination of pupils should receive very careful consideration. The school officials in each city should carefully assemble data over a considerable period of years, showing changes in enrolment by grade and by age, amount of elimination and where it occurs and causes of elimination These data will furnish a splendid factual basis for the analysis of conditions and for singling out certain places for special study. These should be organized in such a way as to show tendencies; these can be shown best by arranging the material in the form of charts or graphs. Some facts showing general conditions are given below in order to illustrate the method proposed and to show the tendencies in the country as a whole

2. *Changes in Enrolment*—The general situation regarding enrolment is shown in Fig 5 on page 23 The tremendous increase in enrolment in American secondary schools and colleges during the past ten years is one of the outstanding educational facts of the world. Some regard it as merely temporary and as even dangerous. Counts,[1] however, shows clearly that it is founded upon deep seated economic and social conditions and will tend to increase rather than diminish If this is true, guidance will be profoundly affected in both amount and general character.

3 *Changes in Elimination*—The changes in the curve of elimination still further emphasize this tendency This may be shown by a consideration of the data from a single city. Figure

[1] Counts, George S, Secondary Education and Industrialism (The Inglis Lecture, 1929), Cambridge Harvard University Press, 1929

21 shows the changes in the percentage of elimination in St. Louis for different years.

In this chart we see the curve at its steepest in 1923–1924. After this the curve flattens out, showing the gradual increase in the holding power of the upper grades. This is a phenomenon seen in all parts of the country. More pressure is brought to bear to keep children in school and methods are adapted more
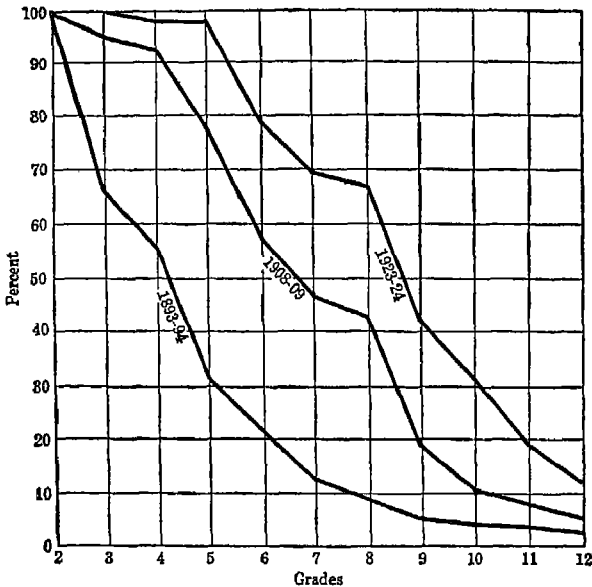
FIG 21 —Changes in the curve of elimination in St. Louis

fully to meet the needs of pupils The peculiar "hump" in the seventh and eighth grades in the year 1923–1924 is probably due to the introduction of the junior high school. In many schools, this "hump" continues through the ninth grade, showing a marked increase in the power to hold pupils through the junior high school.

4. *Elimination by Grade.*—The chart above shows that in 1923–1924, in St Louis, 21 out of every 100 pupils who entered the second grade did not reach or complete the sixth grade, 30 did not reach the seventh, 33 did not reach the eighth, 57 did not reach the ninth, 67 did not reach the tenth, 80 did not reach the eleventh, and 86 did not complete high school That

is, more than half had dropped out before reaching the ninth grade. This has great significance, as it shows that guidance, to be effective for the majority of pupils, must be introduced before the ninth grade. The chart shows also that the greatest percentage of elimination is between the tenth and eleventh grades, and the next highest is between the eighth and ninth grades. Statistics from the country at large indicate that the highest percentage of elimination occurs between the ninth and the tenth grades. This does not mean that the majority of the pupils drop out, for the country at large, at the end of the ninth grade, and for St. Louis at the end of the tenth grade; as indicated above, over half of the pupils leave before they reach the tenth grade.

5. *Grade at Leaving School.*—Another source of light upon this question is the comparison of the grades completed by those who dropped out of school to go to work. A careful study of continuation school pupils in Philadelphia was made in 1922–1923 by a committee under the direction of Edwin W. Adams. The general results are shown in Table XXXIV.[1]

TABLE XXXIV.—GRADE AT LEAVING SCHOOL OF CONTINUATION SCHOOL PUPILS IN PHILADELPHIA—2,433 PUPILS
In Percentages

	Grade 7	Grade 8	Grade 9	Grade 10
Boys	16	33	43	8
Girls	46	44	9	1
Both	27	37	31	5

This shows certain significant differences between boys and girls, the former tending to drop out more frequently in the ninth grade and the latter in the seventh and eighth grades. Nearly two-thirds of all who dropped out did so before reaching the ninth grade.

6. *Study of Elimination in New Jersey.*—Miss Mary E. Roberts,[2] in a state-wide study of those who dropped out of

[1] ADAMS, EDWIN W., and others, A Study of Continuation School Pupils, *University of Pennsylvania Bulletin*, Vol. XXIII, No 38, Annual Schoolmen's Week Proceedings, Philadelphia: University of Pennsylvania, 1923, pp 189–201

[2] ROBERTS, MARY E., Eliminations from the Public High Schools of New Jersey, Doctor's Thesis, University of Pennsylvania, 1930.

the New Jersey high schools, found that 44 per cent of those who dropped out of high school dropped out in the ninth grade, 33 per cent in the tenth grade, 17 per cent in the eleventh grade, and 6 per cent in the twelfth grade. over three-fourths of those who dropped out did so before reaching the eleventh grade.

These data are but samples of the kind of information that should be collected. They reveal certain general facts that are of great significance. They show in what grades the greatest elimination occurs, and give the basis for the organization and administration of certain types of guidance needed by different groups of pupils. The same sort of data can easily be collected from year to year in any school and, when organized, will be very useful in forecasting crises in the lives of students and in enabling the school to prepare adequately to meet these crises.

7. *Elimination by Age.*—It is also desirable to secure data on the ages at which elimination occurs. This can easily be done in most school systems. The results of the studies by Miss Roberts and by Mr. Adams, above, are given as examples. Adams found that 67 per cent of the boys and 79 per cent of the girls who were in the continuation school had left school when they were fourteen years old. Considering the boys and girls in one group, 72 per cent had left when fourteen years old and 28 per cent when they were fifteen.

Miss Roberts[1] found that of those who dropped out of high school in New Jersey, 2.8 per cent dropped out between the ages of ten and thirteen; 13.2 per cent, at fourteen, 24.9 per cent, at fifteen; 32.3 per cent, at sixteen, 15.3 per cent, at seventeen, 7.7 per cent, at eighteen; 2.6 per cent, at nineteen, and 1.2 per cent at twenty and over.

8. *Causes of Elimination.*—Probably the most important set of facts regarding elimination is that relating to the causes of leaving school. It is here that we meet with the greatest difficulty. As shown on pages 105–107, school records are very unreliable on these points; they are usually based upon the word of the pupil and this is often very untrustworthy. Many such studies have been reported and the results are very similar. Two of these will be given.

[1] ROBERTS, *op. cit.*, p. 224.

In the study referred to on page 241, Adams, relying upon the word of the pupils, obtained the results shown in Table XXXV[1]

This table shows that of the causes of withdrawal given, a total of 50 per cent are listed under economic pressure of some kind, considering causes 1, 2, 3, and 4 as economic pressure It has already been pointed out that the statements of children regarding the reasons for leaving school could not be relied upon as accurate, and we must discount the figures very materially, especially those regarding economic necessity or economic pressure At least as significant as economic necessity is the fact that the causes listed from 6 to 10 indicate some maladjustment in the school. these total 35 per cent The study by Carback mentioned on page 105 indicates still further the unreliability of the reasons for leaving school given by the students. Great care should always be taken to follow up cases of withdrawal and find from a variety of evidences what the real cause was These can often be obtained only by the school visitor using the case method—a long and tedious process.

TABLE XXXV —REASONS FOR LEAVING SCHOOL—CONTINUATION SCHOOL PUPILS OF PHILADELPHIA

	Reasons	Percentage
1	Earnings needed at home	29 0
2	Father's unemployment	9 4
3	Father's death	10 0
4	Mother's death	1 4
5	Money wanted	11 0
6	Tired of school	20 1
7	Child believed training poor	7 2
8	Enough education	1 6
9	Failure and discouragement	5 0
10	Trouble at school	1 3
11.	Miscellaneous	4 1

A more detailed and careful study of the causes for leaving school is reported by Brewer[2] This is a list of causes taken from the records of a "large high school which had the usual curriculum, except the industrial."

[1] ADAMS, *op cit*, p 192

[2] BREWER, JOHN M, and others, Cases in the Administration of Guidance, New York McGraw-Hill Book Company, Inc, 1929, pp 81–83

Reasons for Leaving School

Freshmen

			Total
1	Over age for grade		29
2	Moved to other cities		22
3	Received stay-at-home permits		19
4	Actual need of job		18
5	Real desire to work		14
6	Illness		8
7	Returned to other schools		4
8	Dislike for school		2
9	Died		2
	Total registration	832	
	Total withdrawal	118	

Sophomores

			Total
1	Granted working certificates		50
2	Moved to other cities		25
3	Actual need of work		14
4	Home permits		13
5	Illness		12
6	Obtained work in order to secure freedom which non-attendance at day school could not give		10
7	Desire on part of girls to have attractive clothes but not in actual need of work		5
8	Inability to do high-school work		5
9	Desire to follow vocation in fine arts (conservatory of music, stage)		5
10	Unwillingness to change course adapted to suit his needs		5
11.	Died		3
12	Transferred to trade school		3
13	Suspended		1
	Total registration	866	
	Total withdrawal	151	

Juniors

1	Actual need of work		29
2	Illness		20
3	Moved to other cities		15
4	Work for more than spending money		10
5	Inability to do high-school work		5
6	Returned to other school		3
7	Misfits in program		2
8	Died		2
9	Transferred to another school in the city		5
	Total registration	824	
	Total withdrawal	91	

REASONS FOR LEAVING SCHOOL (*Continued*)

SENIORS

1	Graduated in middle of year	17
2	Transferred to other schools	8
3	Illness	7
4	Obtained work partly because of possibility of not graduating	6
5	Moved to other cities	5
6.	Transfer of misfits to other schools	2
7	Inability to do high-school work	1
8	Permission granted to leave in May	1
9.	Obtained jobs on account of actual need	3
	Total registration . 580	
	Total withdrawal . . 50	

It appears from the preceding table that a considerable percentage of boys and girls leave school in each of the four high-school grades The largest number leave in the freshman and sophomore years They drop out for various reasons; but it will be seen that many leave school because they are not interested, because they find the school work too hard, or because they want to go to work.

It is not stated how the material was gathered for the list. It is apparent, however, that some items were taken from the school records and some were based either upon the word of the students or upon more or less definite follow up work. It is altogether likely that many of the reasons given are not the real causes of leaving and that the 47.2 per cent of students listed as leaving for economic reasons includes many who left because of some reason connected with the school, maladjustment, failure of the school to provide suitable offerings, social problems, etc.

In that illuminating study of a mid-western city called Middletown[1] a partial follow up study of these causes was made and some interesting results were obtained.

A number of mothers who said that a child had left school because he "didn't like it" finally explained with great reluctance, "We couldn't dress him like we'd ought to and he felt out of it," or "The two boys and the oldest girl all quit because they hated Central High School They all loved the Junior High School down here, but up there they're so snobbish If you don't dress right you haven't any friends" "My two girls and the oldest boy have all stopped school," said another mother "My oldest girl stopped because we couldn't give her no money for the right kind of clothes. The boy begged and begged to

[1] LYND, ROBERT S, and LYND, HELEN M, Middletown, New York: Harcourt, Brace and Company, 1929, pp 185–186.

go on through high school, but his father wouldn't give him no help. Now the youngest girl has left 10B this year She was doing just fine, but she was too proud to go to school unless she could have clothes like the other girls" The marked hesitation of mothers in mentioning these distasteful social distinctions only emphasizes the likelihood that the reasons for their children's leaving school summarized above understate the real situation in this respect

All other attempts to follow up the causes given have had the same result—to decrease materially the percentage of those who left because of economic necessity and to increase the percentage of those who left because of some reason connected with the school or of social difficulties that are remediable

We should also analyze the withdrawals with respect to scores in intelligence tests, scholastic standing, and school difficulties of a more personal sort, such as adjustment to the school, trouble with teachers, etc., if we wish to get any adequate idea of the real causes of elimination.

All these facts are of such vital importance that every school should prepare carefully from year to year comparative data of enrolment, of elimination, and of causes of withdrawal, and have them in such form that the significance of the data may be clearly seen and steps taken to meet whatever situation arises.

QUESTIONS

1 How long is it desirable for a child to go to school?

2 Should we attempt to keep all children from leaving school?

3 Are child labor laws infringements of personal liberty?

4 Does the increase in the power of the school to retain pupils increase or decrease the need for guidance?

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3 KEESECKER, WARD W Laws Relating to Compulsory Education, *U S Bureau of Education Bulletin* 1928, No 20, Washington Government Printing Office

4 Statistics of Public High Schools, 1925–1926, *U S Bureau of Education Bulletin* 1927, No 33, Washington Government Printing Office

5 WINDES, E E · Trends in the Development of Secondary Education, *U S Bureau of Education Bulletin* 1927, No 26, Washington Government Printing Office

CHAPTER XV

METHODS OF SECURING AND ASSEMBLING FACTS ABOUT COURSES OF STUDY, SCHOOLS, AND COLLEGES

I. THE PROCESS OF FACT FINDING

One of the most important parts of the entire guidance program is concerned with securing and organizing in usable form the essential facts about educational oppportunities While it is usually not difficult to secure and assemble such facts, many schools neglect it entirely

We are again confronted with the difficulty of separating the three functions of guidance: (1) finding facts about the individual, (2) finding facts about courses and schools, and (3) guiding the student We must continually keep in mind that these functions are not separate even though we may discuss them separately. Facts about courses and schools are gathered by teachers or counselors and by the students themselves There are also two different ways of obtaining facts about courses and schools. We may obtain the more or less formal facts by investigating printed courses of study, college catalogues, and other documentary material. There are other facts, no less important, that can be obtained only by actual experience in the courses and schools themselves, or in situations that are similar to the courses and schools to be entered later, that is in orientation courses, preview courses, vestibule courses, or other exploratory and try-out courses When these methods are used, it is impossible to separate the fact-finding process from the guiding process and finding facts about courses and schools enables us to find facts about the students. For purposes of this discussion we shall confine our attention to the function of finding facts about courses, schools, and colleges. In this discussion we shall stress the methods of securing such facts as may be found in courses of study, college catalogues, and other sources, and merely call attention to the activities which are exploratory in nature and which must be used to supplement the other information.

Since these exploratory activities are so intimately connected with the process of guiding the student, they will be considered more in detail in Chap. XIX.

II. Types of Important Facts

It is necessary to secure at least four types of important facts relative to educational opportunities, if we are to cover the ground at all satisfactory. We must know something about these four phases of school work in order to have a starting point in guiding a student:

1. Values of further schooling
2. Types of schools open at each stage
3. Purposes, qualifications for entrance, costs, etc , of each type of school
4. Analysis and evaluation of courses and of the general school life of the schools next ahead

Most of these facts are easily secured and are often provided in convenient form; others are more difficult to secure and usually need special investigation; some can be obtained by consulting catalogs and other documents; some can be obtained only by previous courses or other exploratory activities.

III. Facts about the Secondary School

1 *Increasing Importance of the Secondary School* —The tables given on page 235 show that forty-three states require young people to attend school at least through the elementary school unless otherwise exempt, and twenty-nine states require the completion of the sixth grade before working certificates are issued. While compulsory attendance laws are by no means always strictly enforced, the census of 1920 showed that over 92 per cent of all children thirteen years old were in schools of some kind and that over 86 per cent of those who were fourteen years old were in school. In 1907 half the children reached or completed the seventh grade Since that time the proportion of children not only entering but completing the senior high school has increased enormously. We can confidently look forward to the time when the large proportion of our boys and girls will secure the equivalent of a high-school training and practically all will complete the junior high school. It thus becomes increasingly important that all boys and girls should learn about the opportunities offered in the junior and senior high schools. Since most states do not require the completion of more than the sixth grade for exemption from school attend-

ance or for granting the working certificate, it seems evident that some of this information should be given to students not later than the sixth grade in order that all may know what opportunities are open to them Here, again, we should emphasize the fact that guidance is a function that is not confined to any one place in the school system. It should be regarded as a continuous process, giving help whenever the pupil needs help, in every grade of school at every point where decisions need to be made.

2. *The Sixth Grade*—There should be available in the sixth grade definite information about the junior high school facilities, the location of the schools, the courses of study with the purposes of each, the school life and activities. These can usually be obtained from the office of the superintendent When these are not available, the information can easily be secured from the junior high schools themselves In addition to this information, there should be available the same type of information regarding continuation schools and other types of schools, part time, evening, etc , where pupils who cannot go on to the junior high school can secure help. Sixth-grade teachers should also know something about the educational qualifications necessary for entrance into certain occupations so that they may assist pupils who are expecting to leave school at the end of the sixth grade and who wish to enter occupations for which further education is necessary

3. *The Junior High School*—As usually arranged, the greater part of this form of guidance is done in the junior high school, itself. The nature of the organization of the school lends itself to such a plan. The facts about the junior high school are usually well selected and organized and presented in the form of printed circulars or pamphlets These vary from simple statements of the courses offered, showing required and optional work, to very elaborate folders describing the various offerings, giving attractive pictures of classes in operation, with descriptions of student activities and general school life. A good example of a simple folder is that used in the Baltimore schools called, "Yours to Choose." In connection with each course is given a list of occupations for which the course is supposed to prepare. Schools that do not have such pamphlets can easily prepare them as a cooperative enterprise.

Junior-high-school teachers should also have similar information regarding the senior high school. The choices usually

offered in the ninth grade necessitate information regarding the courses offered in the next school. These are also usually already assembled by the school authorities and present the same variation in elaborateness as seen in the junior-high-school pamphlets One of the best known is that published in Cleveland and entitled "Illustrated Course of Study." This presents in attractive form facts about the courses of study and also about school life and activities.

The farther up we go in the school the more important it is to have very definite and detailed information about other types of school available to the pupil Teachers should have at hand definite information about private secondary schools Much of this information may be obtained in Sargent's "Hand-book "[1]

Business colleges and various other types of vocational schools should be listed and their purposes and requirements for admission noted One of the best examples of such a list is that compiled for Philadelphia originally by Jane Harper and revised in 1920 by a committee of the Vocational Guidance Association of Philadelphia and Vicinity [2] This not only gives a list of vocational schools but describes in detail the entrance requirements, the general nature of the work offered, and other points of interest to the pupil This involves a great amount of work but it should be done for every city It is also very necessary that it be constantly revised, for schools change constantly, especially the vocational schools. A similar list has been compiled for the entire state of Pennsylvania.[3] This gives very valuable information about the most important vocational schools and other forms of vocational training in the entire state

4. *The Senior High School.*—If the work of the junior high school has been well done, the students entering the senior high school will already have most of the information that they need about the school, but it is hardly safe to depend

[1] SARGENT, PORTER, A Handbook of American Private Schools, Boston· Issued annually

[2] HARPER, JANE, A Survey of Opportunities for Vocational Education in and near Philadelphia, Philadelphia: Public Education and Child Labor Association of Pennsylvania, 1921

[3] DELAPLAINE, MERIBAH, STRAUSS, LILLIAN L , AND DE YOUNG, ROSA S , A Survey of Opportunities for Vocational Education in Pennsylvania, Philadelphia Public Education and Child Labor Association of Pennsylvania, 1929.

upon this for the junior high school may not have done its work well or the students may have forgotten the information they have received. Those in charge of guidance in the senior high school should have the same types of information regarding the offerings of the senior high school and of other schools as that just described under the head of the Junior High School. This is necessary in order to make sure that the new student is properly adjusted to his new environment and to make it possible for him to change to another type of school if the school he has entered does not meet his needs. In looking up information regarding private college preparatory schools it would be well to secure from the different regional accrediting associations[1] the lists of schools accredited for college

5 *Exploratory and Try-out Courses.*—In addition to the facts gathered together by teachers and students from various sources, other facts gained from personal experience are utilized. Some of these are obtained from the general courses offered in the junior high school and developed elsewhere. These general courses in science, in mathematics, in language, and in social studies are designed to give the students a preview of more advanced and definitely organized courses and to show him something about the nature of the work in the school or class next ahead.

The various clubs give him additional experiences from which he can secure much valuable information about school life and requirements. Not infrequently students in the junior high school are invited in a body to the senior high school and every care is taken to show them what the school is like and to given them a basis for deciding whether they wish to continue their schooling or not.

IV Facts about Colleges

1. *Important Facts about Colleges* —One of the most important tasks of the senior high school is to secure important facts about colleges and to organize them in such a way that they can readily and easily be used. What are the facts about colleges

[1] These are The New England Association of Colleges and Secondary Schools, The Association of Colleges and Secondary Schools of the Southern States, The Association of Colleges and Secondary Schools of the Middle States and Maryland, The North Central Association of Colleges and Secondary Schools, and the Northwest Association of Secondary and Higher Schools

TABLE XXXVI.—INFORMATION NEEDED FOR THE SELECTION OF A COLLEGE[1]

	College professors		College freshmen		College upper classmen		High-school faculty		High-school seniors		Totals	
	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
1. Cost:												
a Tuition	23	88	210	83	69	90	85	89	557	92	944	90
b Board	23	88	181	72	64	83	82	86	445	70	795	75
c. Room	23	88	178	70	61	79	78	82	406	67	742	70
d. Minimum expense	23	88	194	77	71	92	88	93	505	84	881	84
e Fees (most important)	21	81	177	70	64	83	81	85	468	78	811	77
f. Scholarships, etc	23	88	139	55	51	66	64	67	345	57	622	59
g. Chances to earn	21	81	169	67	62	80	64	67	481	80	797	76
2 Standing of colleges	17	65	123	49	42	55	51	54	282	47	515	49
3 Kind of institution												
a College or university	20	77	180	71	54	70	58	61	444	70	756	72
b. Coeducational, etc	21	81	192	76	53	69	66	69	372	62	704	67
c. Size	19	74	161	64	56	73	75	79	352	58	663	63
d. Support	13	50	78	31	15	19	31	33	231	38	368	35
e. Sectarian or not	18	69	163	64	54	70	49	52	386	64	670	65
4 Admission												
a. Methods	23	88	196	77	71	92	87	92	492	81	869	82
b Requirements, etc.	24	92	229	91	74	96	89	94	533	88	948	90
5 Special courses	19	74	180	71	60	78	64	67	460	78	783	74

6. Degrees	17	65	207	82	71	92	70	74	459	76	824	78
7. Student activities	21	81	170	67	48	62	49	52	419	69	707	67
8 Location	21	81	199	79	70	91	77	81	457	76	824	78
9. Physical surroundings	13	50	151	60	46	60	47	49	370	61	627	59
10. Physical equipment	21	81	164	65	57	74	57	60	425	70	724	69
11. Strong departments	20	77	170	67	55	71	64	67	396	66	705	67
12. Honors courses	12	46	91	36	30	39	33	35	271	45	437	41

[1] Evans, Florence, Guidance in the Selection of a College, Philadelphia Public Education and Child Labor Association of Pennsylvania, 1925, p. 20.

that it is important for the high-school student to know? Miss Florence Evans[1] sent a questionnaire to nearly a thousand different people—college professors, college freshmen, college upperclassmen, high-school teachers and high-school seniors. In this she attempted to find what items were considered essential. The results of her study are given in Table XXXVI, on page 252 Miss Evans draws some interesting conclusions from the table.

It is interesting to note some of the differences among the four groups The subject of cost, especially tuition and minimum annual expense, and the subject of admission received the greatest number of checks and the others varied all the way from 12 to 92 per cent. The upper classmen valued the knowledge of college costs more than did the freshmen, and degrees seemed more important to them than to any other group Together with the college teachers, they valued the knowledge of strong departments in the college more than did the others, as was only natural It seemed odd that the college freshmen valued the knowledge of admission methods the least of all Only 52 per cent of the high-school faculties and 62 per cent of the upper classmen thought knowledge of student activities necessary, while 81 per cent of the college professors did think it so

It was noteworthy to find such low percentages for the standing of the college. Only 54 per cent of the high-school faculty checked that as necessary information. Another interesting fact was that scholarships, loan funds, and prizes were checked by only 55 per cent of the college freshmen, 57 per cent of the high-school seniors, 66 per cent of the upper classmen and 67 per cent of the high-school faculty, while 88 per cent of the college teachers valued them enough to check them Likewise, only 67 per cent of both college freshmen and high-school faculty checked opportunities to earn, while 80 per cent of the other three groups did so

Only 62 per cent of the high-school seniors thought knowledge of coeducation necessary, but 76 per cent of their older brothers and sisters who were college freshmen deemed it so Only 69 per cent of the older college students and high-school faculty checked this item, but 81 per cent of the college professors thought it necessary information. About the only item valued less by the college teachers was that of degrees Only 65 per cent of them checked this, while 92 per cent of the upper classmen did so.

[1] EVANS, FLORENCE, Guidance in the Selection of a College, Philadelphia: Public Education and Child Labor Association of Pennsylvania, 1925, pp. 21, 22.

Most high schools do not have information regarding all of these points Many schools secure information about admission requirements from various colleges to which their students ordinarily go and organize them in the form of charts so that differences and similarities may be seen at a glance

2. *Collections of Information* —The best collection of information about colleges now available is that compiled and printed by the American Council on Education [1] This contains a description of nearly 400 universities and colleges throughout the United States Among the items described are. (1) name; (2) general character, (3) endowment; (4) size of grounds, number of students and value of buildings, grounds and equipment; (5) library and laboratory facilities; (6) admission requirements, (7) courses offered and degrees, (8) fees and other expenses; (9) facilities for self-help, (10) date of beginning and closing sessions A separate list and description of professional schools is given under the headings, Law, Medicine, Engineering, Education, etc The information may be regarded as accurate for the year in which it was compiled, 1926–1927, because it was presented by the colleges and universities themselves This book should be in every high school and should be constantly referred to by teachers and counselors

Another compilation of a smaller number of colleges is that made by Miss Florence Evans [2] This is in much more convenient form and contains some information not found in the larger book. The information was obtained by a study of the catalogues of the colleges, from the supplementary bulletins published by colleges, such as "General Information," student handbooks, etc , and from personal letters The information was assembled and organized and sent back to each institution for verification. For the sixty colleges listed the information may be considered reliable for the year 1924–1925. The data for each college are arranged in outline form under the following heads

OUTLINE OF TOPICS

1 Name

2 Classification and number of students (given merely to indicate in general the size)

[1] ROBERTSON, DAVID A., American Universities and Colleges, New York: Charles Scribner's Sons, 1928

[2] EVANS, FLORENCE, Guidance in the Selection of a College, Philadelphia. Public Education and Child Labor Association of Pennsylvania, 1925

3. Location.
4 Physical surroundings, including campus, river, etc.
5. Physical equipment including special buildings, size of library, etc.
6 Organization and degrees.
7. Admission
   a. Limitations
   b. Requirements
   c. Methods of entrance.
8. Student life.
   a Religious.
   b. Student government.
   c. Clubs.
   d. Publications
   e. Athletics.
9. Expenses.
   a Tuition and board.
   b Student aid
10 Miscellaneous.

This little pamphlet is chiefly useful as a sample of what each high school could do. The essential information for each college and university could be placed upon a single sheet and kept in a loose-leaf notebook. This would allow constant revision so necessary for keeping information up to date. In addition, charts showing comparative requirements for admission could be prepared and used for quick reference.

The same information should also be secured for normal schools, teachers' colleges, and schools where special types of training are offered, such as art, music, etc.

While some of this information is very useful and very essential for the junior high school, it is the especial task of the senior high school to collect and organize it so that it may be readily used.

Aside from the regular college preparatory classes in the high school, it is quite difficult to find opportunity for much try-out and exploration. Some schools do make an attempt to prepare students for the life at the college by teaching them how to take notes, how to schedule time, etc. Some parents send their children to a boarding school for a year or two before sending them to college in order to make the transition from home care to college life more gradual. This semi-independent boarding school life does, in a way, provide for exploration and try-out in a situation that is something like college life.

The chief means of providing for exploration is in the college itself. Many colleges have organized preliminary, preview, or orientation courses for freshmen. These are extremely varied in their nature and purpose. Some base their work upon science, others upon history or social studies in general. All attempt to give the beginning student a bird's-eye view of the major fields of human activity so that he may properly orient himself both in his choice of studies in college and in his outlook upon life. These courses often give definite facts about college life and college requirements that materially help the student in adjusting himself to his new life.

Freshman Week, described on page 302, is also very helpful in giving useful information The annual field days organized by various colleges for interscholastic sports, while very inadequate for the purpose of exploration, and often top heavy on the athletic side, do help the high school student to get some idea of the college and of college life. These are very inadequate, but are only the beginnings and show, at least, that schools and colleges are beginning to recognize the need for giving the prospective college student adequate information of all kinds in order that his choice may be a wise one.

QUESTIONS

1. How long before graduation should pupils have information about colleges and other types of schools?
2. How can schools cooperate with one another in securing information?

REFERENCES

1. DELAPLAINE, MERIBAH, STRAUSS, LILLIAN L, and DEYOUNG, ROSA S. A Survey of Opportunities for Vocational Education in Pennsylvania Philadelphia The Public Education and Child Labor Association of Pennsylvania, 1929.

2 EVANS, FLORENCE. Guidance in the Selection of a College (*Publication* No. 106), Philadelphia. The Public Education and Child Labor Association of Pennsylvania, 1925

3 HARPER, JANE· A Survey of Opportunities for Vocational Education in and near Philadelphia, Philadelphia: The Public Education and Child Labor Association of Pennsylvania, 1921.

4. ROBERTSON, DAVID A.: American Universities and Colleges, New York Charles Scribner's Sons, 1928.

5 SARGENT, PORTER A Handbook of American Private Schools, Boston: Porter Sargent Issued annually

6. Pamphlets issued by boards of education, such as those in Baltimore, Boston, Chicago, Cleveland, Minneapolis, Philadelphia, San Francisco.

CHAPTER XVI

METHODS FOR THE INVESTIGATION OF OCCUPATIONS

I. THE TWO FUNCTIONS OF OCCUPATIONAL INVESTIGATION

In this chapter, as in Chap XV, we must clearly distinguish between (1) the function of securing facts as a background for the counselor, providing the *materials* for guidance; and (2) the function of studying occupations by the students themselves, as a *method* of guidance. They are each essential parts of the guidance program The former is concerned with assembling data that can be used to guide the student, the latter is an essential part of the process of guiding the student. He investigates occupations in order to learn about them and to get a better idea of the value of securing facts about them before he makes a choice By doing this he also obtains some little training in methods of getting at the facts In this discussion, we are concerned with the methods of securing and assembling facts about occupations that are useful to the teacher or counselor as a background for guidance, to assist in the process of guiding the student The other function, that of the investigation of occupations by the students themselves, will be described in Chap XIX

II. ESSENTIAL FACTS ABOUT OCCUPATIONS

1. *Difficulties of the Task.*—The problem of securing information about occupations is at once beset by many difficulties. The number and variety of occupations are so bewildering and the kinds of work done in occupations listed under the same name are often so unlike that it is difficult to get at data that are accurate and reliable Many occupations do not stand still long enough to be studied. As soon as you have facts about them at any given time, the occupations change and the facts are out of date and worthless. Investigations into occupations,

like all other social investigations, cannot usually be safely undertaken on any large scale by teachers and counselors; it is the job of the expert. It is, however, very essential for guidance workers (1) to know where to get facts, (2) to know how to distinguish between facts and fancies, and (3) to know enough about methods of research to conduct local investigations for supplementary data and to assist students in their investigations

2. *Outline of Topics* —What sort of facts is it desirable to secure regarding occupations? As in the case of facts about individuals, we may say that, potentially, any fact may be valuable. But, obviously, certain facts are *always* more valuable than other facts and some facts are *usually* more valuable Many outlines of such facts about occupations have been made and most of the essential points are matters of common agreement The following list is a composite of a number of those already printed and in use, but the material has been somewhat rearranged.

OUTLINE OF ESSENTIAL FACTS ABOUT OCCUPATIONS

1. General description—importance in the community, in the state and nation, service to society.
2. Working conditions·
   - *a.* Hours of employment.
   - *b* Wages—beginning—increases.
   - *c.* Steadiness of employment—seasonal demands, etc.
   - *d* Housing—general conditions of work.
   - *e.* Health and welfare facilities
   - *f.* Organization of occupation; simple, complex, gradation of officers, participation by employees
   - *g.* Organization of workers; unionized, open shop, etc.
   - *h.* Trade conditions:
     - (1) Demand—increasing or decreasing.
     - (2) Supply of workers—amount, sources.
   - *i.* General advantages and disadvantages·
     - (1) Social status
     - (2) Provision for compensation, pensions, etc.
     - (3) Factors that interest and develop the worker.
3. Possibilities·
   - *a.* Provision for systematic instruction and supervision on the job.
   - *b* Extent to which occupation may be learned while working
   - *c.* Line of promotion and possibilities of promotion
   - *d* Probable changes in character of occupation or job; increase in size of plant, increased specialization of work, improvement in status, etc.

4 Job analysis.
  a. The nature of the tasks, the materials with which to work, the equipment.
  b The output amount, character, demand
  c. Qualifications needed
    (1) Age.
    (2) Sex.
    (3) General education
    (4) Necessary technical training
    (5) Skills and special aptitudes.
  d. Strains and hazards—mental, moral, social, and physical.
  e Common deficiencies of workers
5 Legal conditions—child labor and general labor laws

This outline will serve to show the facts considered essential in the study of any occupation and the facts that the counselor should have at hand when attempting to assist students in the study of an occupation or to assist them in any situation relating to occupational choice. It is, of course, not expected that the counselor will have all of these facts committed to memory and ready for instant use. He should have them where he can get them quickly and ready for use when the need arises. Such an assembly of facts and references serves the counselor in the same way that books on medicine serve the physician, or reference books, the history teacher; they are sources for obtaining references—references to which he can turn when he needs certain reliable information.

III Sources of Facts

Where can such facts be obtained? During the past ten years this need has been recognized and many reliable studies of occupations have been made It is not possible here even to list all of the material available, much less to describe the studies that have been made.

1. *Bibliographies.*—Every counselor should have at hand bibliographies giving lists of occupational studies and where the studies can be obtained By far the most comprehensive bibliography on occupational information yet published is that of Parker and Moyer [1] This lists sources of information under 9,000 references and 550 job specifications. Allen's "Guide to

[1] Parker, Willard E, and Moyer, D H, Bibliography of Occupational Information, New York National Occupational Conference, 1934

the Study of Occupations"[1] will also be found helpful This is "a selected critical bibliography of the common occupations with specific references for their study." Occupations are listed in alphabetical order with references, and a critical bibliography of the various references is also given No vocational counselor can afford to be without this book. Homer J. Smith has compiled a bibliography of occupations and their uses[2] that counselors will find very useful This is divided into four parts.

Part I —One Hundred Books More or Less Definitely Descriptive of Specific Occupations

Part II —Books of Information and Inspiration to Those Concerned with Occupational Selection

Part III —Suggestions of the Kind and Amount of Occupational Materials Procurable from Various Sources

Part IV —Periodical References Concerning Occupational Studies and the Use of Resultant Information

Much valuable material is also given in brief form in Teeter's "Syllabus on Vocational Guidance."[3] The advantages of Allen's book are that (1) it is much more comprehensive, (2) it gives a critical analysis and evaluation of the various studies and (3) it gives definite reference so that the reader may know where to get the study listed. Most schools do not have a sufficient amount of money to purchase many of the studies. A careful selection from year to year, however, of a few such studies will soon result in a fairly satisfactory working collection of reliable material

2. *The Chief Sources.*—A rapid survey of the material available will show that these studies cover a wide range of occupations and have been made by individuals and agencies widely scattered and representing different interests and different points of view Some of the chief sources will be listed in outline form in order to show the range and variety of agencies at work in this important phase of vocational guidance.

[1] ALLEN, FREDERICK J , A Guide to the Study of Occupations, Cambridge: Harvard University Press, 1925

[2] SMITH, HOMER J , Occupational Descriptions and Their Uses, A Bibliography of Five Hundred Items, *The Vocational Guidance Magazine*, 7, 361–367, May, 1929

[3] TEETER, VERL A., A Syllabus on Vocational Guidance, New York The Macmillan Company, 1928, pp 3–18.

CHIEF AGENCIES MAKING STUDIES ON OCCUPATIONS

1. Departments of the federal government
   a United States Bureau of the Census
      The general data on workers in various types of occupation is very valuable to give a broad view of the whole field of occupations.
   b. United States Department of Labor
      (1) *Training Service Bulletins*
      (2) *Women's Bureau Bulletins*
      (3) *Children's Bureau Bulletins*
   c Federal Board for Vocational Education
   d United States Bureau of Education
2 National Research Council, Washington, D C, Division of Education Series *Career Pamphlets*
3 State Departments of Education
   a State Board of Education, Madison, Wis
   b State Board of Control for Vocational Education, Lansing, Mich.
4 Colleges and Universities.
   a University of California
   b Indiana University, Bloomington, Ind
   c. Iowa State College, Ames, Iowa
   d University of Michigan, Ann Arbor, Mich
   e University of Minnesota, Minneapolis, Minn
   f. University of Oklahoma, Norman, Okla
   g Stanford University, Palo Alto, Calif
5 City Departments of Education·
   a Baltimore Public Schools, Occupational Studies
   b Boston Public Schools, Studies of Occupations
   c Bridgeport Public Schools, Bridgeport, Conn, *Vocational Bulletins*
   d Chicago Board of Education, Vocational Guidance Department, Industrial Studies Division
   e Cincinnati Public Schools, Vocation Bureau, Occupational Research Division, *Vocational Pamphlet* Series
   f Cleveland Public Schools, Bureau of Educational Research
   g Detroit Board of Education, Department of Vocational Information and Guidance
   h Minneapolis Public Schools, Department of Attendance and Guidance.
   i New Orleans Public Schools, Department of Vocational Guidance
   j Board of Education of the City of New York, cooperating with other agencies
   k Philadelphia Public Schools Bureau of Occupations.
   l Pittsburgh Public Schools, Vocational Guidance Department
   m Rochester Public Schools, Occupational Studies.
   n Seattle Public Schools, Occupational Studies.

6 Chambers of Commerce, Boards of Trade, and Service organizations in various cities:

- *a* Cincinnati Chamber of Commerce
- *b* New York City Kiwanis Club
- *c* Philadelphia Chamber of Commerce

7 Private and Philanthropic Agencies

- *a* American Association of Social Workers, New York
- *b* Bureau of Vocational Information, New York
- *c* Milwaukee Vocational School, Division of Vocational Teacher Training and Research
- *d* Southern Woman's Educational Alliance, Richmond, Va
- *e* White-Williams Foundation, Philadelphia
- *f* Women's Educational and Industrial Union, Boston, Mass
- *g* Women's Occupational Bureau, Minneapolis, Minn.

8 Studies by Individuals
Allen lists many such studies

Pamphlets giving lists and descriptions of occupational studies can be obtained by sending directly to the different sources indicated.

3. *Variability in Studies*—These studies are by no means all of equal reliability Some are undeniably published for purposes of propaganda, many are organized in such a way as to appeal especially to certain types of person, as, for instance, the *Opportunity Monographs* of the Vocational Rehabilitation Service, which were prepared especially for disabled soldiers These are helpful in describing general conditions, but they cannot be relied upon in all respects to give exact data, at least not data that are reliable at present. Great care should be taken in the selection of the studies from which facts are taken and in the use made of what is secured. Some studies describe the general conditions of certain occupations, others report the particular conditions of a certain occupation in a certain locality. Some, as those by Charters, are job analyses of occupations These analyses have been directed at three main points (1) analysis of the activities of the workers—what they actually do, (2) the qualities, skills, etc possessed by those working in the occupation; (3) the ways in which workers fail—difficulty analyses. All of these are important, each makes a decided contribution to our understanding of occupational conditions, but, quite obviously, each one contributes in a different way, and great care should be taken to use each study in the particular way for which it was made and

not to expect it to give us all the information we need regarding any occupation.

4. *Need for Supplementing Material.*—These studies provide abundant material for the vocational counselor The chief difficulty is that it is too abundant and somewhat too indefinite There is need of much supplementary material in order to make the facts apply to local conditions and to keep up with the changes in wages and general conditions of employment. Here is the legitimate field for investigations by counselors themselves. Most counselors are not sufficiently well trained in the technique of occupational study and analysis to make it safe for them to rely entirely upon their own effort to obtain the necessary facts. It is possible for counselors to secure some insight into the methods used by experts by a careful study of some of the occupational investigations listed. It is quite desirable to secure, in addition to this, some definite training in research, but where this is not possible, the counselor may often obtain help and valuable criticism from some trained social worker For example, suppose a counselor wished to receive up-to-date information about the conditions in the baking industry in his city He would take the study made by Louise Durst of the baking industry in Cincinnati. This was made in 1925, and conditions have probably changed even in the city where the study was made; the data given certainly would not apply equally well to any other city; but the technique used and the general facts and conditions would be very helpful if taken as a standard and a method. With these as a basis, the counselor could study the conditions in his city, checking up both on the method used and on the facts obtained. He would at once get into touch with those who have the most reliable information on the baking industry. This might be the Chamber of Commerce or some local organization of those engaged in the baking industry, it might be a civic research organization. With all these as helps, the counselor would make personal investigations of certain baking establishments. All this information would be checked up by comparison with the study made by Miss Durst The studies would not always agree, of course, but any wide divergence would be at once noted and care should be taken to check up on the information obtained to see whether it was reliable. Finally, it is usually possible to obtain the help and advice of

some research worker who is known to be reliable. Such experts are glad to give whatever assistance is possible to those who are really in earnest and who have actually undertaken some worthwhile study of an occupation This help can be given either by correspondence or by personal consultation, the latter method is usually much better.

Special study is necessary to enable the counselor to make use of the facts obtained by others This is definitely recognized and help can be obtained from such a manual as that of May Rogers Lane.[1] Some facts cannot be adequately obtained or, at least, appreciated, by the methods described These are concerned with the general conditions under which the work is performed. Such facts can be obtained only by personal visits to the factory or shop. They can often best be appreciated by actually taking a job for a limited time in the occupation This can often be done in summer vacation. The facts and impressions obtained from such experience should be carefully selected and recorded.

5. *Assembling Data.*—Every school should have a carefully selected list of the most reliable studies of occupations These books and pamphlets should cover a wide range of occupations for men and women and especially those occupations or types of occupations into which young people from the particular locality usually go. These are for the use of the counselor as sources of occupational information and for the use of students both for class work and for individual help If there is a good school library with a trained librarian, this material may well be placed in her charge either in general reference, or on a special shelf. Unless there is a special need for separating the books on occupations from the other books in the library, it is probably better to keep them in their regular place. This will give students training in looking up sources of information in the way they will need to do it later in life in the larger and more complex city and university libraries.

The counselor should have, however, a special card catalogue of the most useful occupational studies from books, pamphlets and magazines for ready reference. These cards should contain not only the usual library card information of author, title,

[1] LANE, MAY ROGERS, Manual to Accompany Vocations in Industry, Scranton, Pa International Textbook Company, 1929

publisher, date, library accession number, etc , but also a brief but careful analysis and evaluation of the study Such a collection of cards will be of great assistance to the counselor and, if carefully made, will save much time. A sample of such a card is given below

Allen, Frederick J., The Law as a *Vocation*
Cambridge, Mass.: Harvard University Press, 1928, 83 pp.

A critical study of opportunities, responsibilities, and rewards in the profession of law A discussion for those who are attempting to choose a career, and for vocational advisers A good, general *treatment* covering the country as a whole. Not so helpful as a model for the technique of studying occupations

In addition to such a collection of studies on occupations and to a special card catalogue, the counselor should select from various studies important facts and assemble them in such form that they can be readily used in class work, for bulletin board

display and for individual consultation Many of these can be arranged in charts and others in comparative tables After such charts and tables are found in occupational studies, they can be copied and enlarged Here is where the counselor can use the help of the students The drawing teacher can usually be interested in the making of such charts, and the cooperation resulting not only makes it possible to provide helpful material for use, but secures as well a wider interest in guidance work.

QUESTIONS

1 What facts about occupations should the vocational counselor attempt to secure?

2 What are some of the "seasonal" occupations?

3 Are there general qualities that make for success in all occupations?

4 Should occupational information be restricted to the occupations immediately surrounding the school?

REFERENCES

It would be useless to attempt to list even typical occupational studies On this account we are merely giving bibliographies where the titles of such studies may be found

1 ALLEN, FREDERICK J A Guide to the Study of Occupations, Cambridge Harvard University Press, 1921

2 ALLEN, FREDERICK J Practice in Vocational Guidance, New York: McGraw-Hill Book Company, Inc , 1927, pp 79–146

3 BREWER, JOHN M , and others Cases in the Administration of Guidance, New York McGraw-Hill Book Company, Inc , 1929, pp 56–76

4 HATCHER, O LATHAM Occupations for Women, Richmond, Va . Southern Woman's Educational Alliance, 1927

5 LANE, MAY ROGERS Occupational Studies of 1927 and 1928, *The Vocational Guidance Magazine*, 7 312–313, April, 1929.

6 MYERS, GEORGE E The Problem of Vocational Guidance, New York · The Macmillan Company, 1927, pp 66–67

7 PARKER, WILLARD E , and MOYER, D H · Bibliography of Occupational Information, New York National Occupational Conference, 1934

8 PAYNE, ARTHUR F Organization of Vocational Guidance, New York McGraw-Hill Book Company, Inc , 1925, pp. 248–271

9 SMITH, HOMER J Occupational Descriptions and Their Uses, A Bibliography of Five Hundred Items, *The Vocational Guidance Magazine*, 7 361–367, May, 1929

10 TEETER, VERL A A Syllabus on Vocational Guidance, New York: The Macmillan Company, 1928.

PART III

METHODS OF GUIDING STUDENTS

"As I have frequently remarked, the mind of man is very narrow and circumscribed, and when it attempts to do more than one thing at once, it only embarrasses itself I have always thought it never could thoroughly know two arts or professions; and when this was attempted, one of the two was sure to be imperfectly understood.

"Thus it seems to me, that it is requisite to set apart a number of sagacious and learned men, to examine, and investigate into, the mental qualifications and capabilities of young persons, in order to oblige them to make a choice of such sciences and professions, as would be most in accordance with their intellectual constitutions, and not to leave the matter to their own choice or direction For in general cases, this choice will necessarily be an injudicious one, and will induce them to give a preference to some line of life which will prove less advantageous and useful to them, than if they were under the direction of suitable and qualified counselors

"It would happen from all this, Sire, that you would have better workmen, and more finished workmanship, throughout your dominions, and persons who know better, than those at present, how to unite nature with art."[1]

[1] Quotation from a letter sent by Juan Huarte to King Philip II of Spain BINGHAM, W V , An Ancient Vocational Guidance Program, *Vocational Guidance Magazine*, 4 23, October, 1925.

CHAPTER XVII

GENERAL METHODS OF GUIDANCE

I THE GENERAL SCOPE OF THE PROBLEM

1. *Function of Information in Guidance.*—In Part II, we have discussed ways in which teachers, counselors, and principals may secure reliable information and assemble it in such a way that it may be efficiently used Obviously, this is very important, but it is entirely preliminary to the actual guidance of students The shelves of offices may be entirely filled with facts about students, schools, and occupations, and the students be no better for it The only reason for getting facts is to help individuals The value of all our machinery set up for guidance is dependent upon the way in which the individual students are helped. The one thing of paramount importance, then, is the actual guidance of the student Incidentally, it is by far the most difficult part of the undertaking

2. *Variation in Methods of Guidance* —In the next six chapters, we shall discuss methods of guiding students with relation to many of the critical problems that arise Only incidental references will be made to where or by whom this help can best be given In the present state of the guidance movement, it would be difficult, indeed, to state with any degree of finality just what part should always be performed by the classroom teacher and what by the counselor It is much more important to make clear the help that should be given than to attempt to decide by whom it shall always be done The probabilities are that different schools will use different methods and employ different agencies for doing the same work However, a brief discussion of the general methods of guiding pupils used very effectively in many schools may be of assistance at this point These general methods are counseling, homeroom guidance, and group guidance.

II COUNSELING

1. *Activities of a Counselor* —We must carefully distinguish between *counseling* and the various things that a counselor does

Edgerton[1] in a study made in 1923 and 1924, analyzed, by the questionnaire method, the various activities of counselors in representative junior high schools, senior high schools, and part-time schools He found these activities ranging from interviewing students, to teaching classes in occupations, to finding jobs for students and following them up, to giving tests, to doing research work in the study of occupations It is sufficient here merely to point out the wide range of things counselors actually do. Edgerton's study makes a very valuable contribution by showing conditions as they are, but it does not tell us much about what counseling is. These teachers with the name of counselors do many things, only a few of which are counseling The mistake, and it is very frequently made in current guidance literature, is to confuse the very important act of *counseling* with certain other duties, more or less transient, we hope, of those who are called counselors Teachers do many things, as has been shown in the Commonwealth Study by Charters and Waples,[2] but by no means all of them can be classified as teaching Teachers usually have to adjust shades, open windows, and clean blackboards, and these activities are all very necessary; but they do not belong to the teaching process The probable cause of the misconception is found in job analysis of various industrial occupations Plumbing is analyzed to see what are the activities involved, these activities are classified as the activities of the plumber and are called "plumbing" So why should we not do the same thing with the occupation of counselor or of teacher? If we accept this we must say, then, that anything that the counselor does is counseling and anything that the teacher does is teaching The analogy is not a good one This may be illustrated, if not proved, by resort to etymology The verbal noun "plumbing" points to the noun "plumber" and means, "that which the plumber does," "a plumber's occupation" Blacksmithing, in a similar way, points to the noun blacksmith. But when we come to teacher we find the opposite true "Teacher points to the verbal noun "teaching" and means "one who teaches" So "counselor" is derived from "counseling" and

[1] EDGERTON, A H, Vocational Guidance and Counseling, New York. The Macmillan Company, 1926

[2] CHARTERS, W W, and WAPLES, DOUGLAS, The Commonwealth Teacher-training Study, Chicago. The University of Chicago Press, 1929

means "one who counsels." If these words had the same connotation we could say: "plumber" is one who "plumbs", "blacksmith" is one who "blacksmiths", but we do not do this In other words, in the case of teacher and counselor, the center and core of what they do is *teaching* and *counseling*. They are called upon many times to do a variety of other things. some of these are only remotely connected with this inner core of their work, sometimes these other duties even seriously interfere with their real work On the other hand, practically everything that a plumber does is called "plumbing," whether this is wiping a joint, putting in a hot-water heater, removing an obstruction in the drain, putting on gutter spouts, keeping books, or sending out bills.

2 *The Importance of the Distinction* —This distinction is not a trivial one; it is vital to the proper understanding and development of guidance work. Counselors are now so burdened with other work as to make it impossible to do counseling well. If we can focus the attention upon *counseling* as the center and core of the work, we shall do much to relieve the situation. Another point of equal weight is that the counselor is not the only person who does or who should do counseling From the nature of the case, the classroom teacher must do much counseling about references, methods of study, and improvement of work as well as about personal habits and intimate problems of life The homeroom sponsor must counsel with her students frequently, it is as vital for her job as it is for that of the counselor. The principal of the school, the athletic coach, everyone connected with the school, must act as counselor at some time and on some occasions Of course, we badly need to come to some decision with regard to the kind of counseling to be done by each one in the system, but let us not forget that the activity of supreme importance is the act of counseling, no matter who does it We must so guard it, organize it, and develop it that it is as effective as may be.

One result of the job-analysis method of approach is seen in the various activities that go under the name of "counseling." We even have "class counseling," used to describe what is done in a class of 40 to 100 by a counselor or homeroom teacher where various things are discussed; or "group counseling," where matters are talked over by teacher and students in groups

ranging in number from 5 to 30 Counseling has such an intimate sound that it would seem advisable to limit it to that intimate, heart-to-heart talk between teacher and pupil It is frankly admitted that it is difficult to draw the line sharply between the essence of what is done in the personal interview and what is done in small groups. But it is even more difficult to make any distinction between group counseling and the more modern forms of class work More and more we are discarding the formal recitation and substituting conferences where the atmosphere is informal, where students feel free to discuss, to ask questions, to make contributions If we could agree to use the term "counseling" for the more intimate individual interview or discussion, no matter who does it, counselor or teacher, we would do much to emphasize the importance of this activity.

3 *Analysis of Counseling*—The most intimate and vital part of the entire guidance program is counseling In the recently adopted Principles of Vocational Guidance, the process of counseling is described as follows.

> Counseling is primarily an individual matter and is more apt to be successful when conducted on this basis From a fund of knowledge of educational and vocational opportunities, both locally and in the country at large, the counselor offers information, advice, and assistance to the individual, bearing in mind his particular interests, ability, and personal situation This counsel should be a regular responsibility of all types of schools and colleges [1]

Webster's dictionary defines counseling as "interchanging opinions; mutual advising, deliberating together" We may help to make clear what this activity is by telling what *it is not* It is not lecturing or talking to the student. Many teachers come from a "conference" well satisfied with themselves, they say "We have had a splendid discussion," when, as a matter of fact, the teacher did all the talking That is not counseling Counseling is not giving advice, although advice may be given. The wise counselor never gives advice except when it is impossible to avoid it Some counselor wisely said, "It is never safe to give

[1] From Principles of Vocational Guidance, adopted February, 1929, by the National Vocational Guidance Association, *The Vocational Guidance Magazine*, 7 221, February, 1929

advice except when you know the other fellow will not follow it." A superintendent of schools once called up a friend over the telephone. He said, "I want to talk over this plan I am working out. I don't want advice. I just want to talk it over with you." The remark was not especially complimentary to the friend, nor was the superintendent tactful, but he was right. Counseling is talking over a problem with someone. Usually, but not always, one of the two has facts or experiences or abilities not possessed to the same degree by the other. The process of counseling involves a clearing up of the problem by discussion; the counselor by skillful questioning brings out what the problem is and makes its implications clear; he often obtains facts from the student; he often gives facts to the student, but more often he gets the student to recall facts he already knows and to so arrange them as to show their significance in the solution of the problem. He suggests lines of study and investigation, he leads the student to see the relationship between various factors and suggests the importance of some facts not regarded by the student as significant. It is distinctly an educational process, often something after the manner used by Socrates.

4. *Counseling in Cincinnati.*—A very good illustration of some of these points is given in the following quotation from the work in Cincinnati described by Miss Corre.[1]

Ninth-grade pupils, however, must often make a definite decision between high school and trade school, and such a choice, if intelligent, must in most cases be based upon a more or less definite choice of vocation.

Personal Records.—In the first conference with the ninth-grade pupils the vocational counselor tries to secure a complete record of the child, his family background, his likes and dislikes, his plans for the future. She endeavors to find out whether or not his is a carefully thought out plan, or whether it has been the result of undue persuasion on the part of family or friends. She suggests other occupations which his interests lead her to believe he may wish to consider, and tells him of ways in which he may prepare for these various occupations. The pupil is encouraged to find out more about the occupations which interest him, to talk with persons employed in the occupations, and to talk with his family concerning the length of time he may be allowed to spend in preparation.

[1] CORRE, MARY P., Vocational Counseling, *The Vocational Guidance Magazine*, 7: 159–163, January, 1929.

In the second conference the child's plans are further developed and often at this time he is ready to make a choice of occupation and the counselor can help him develop his plans for preparing and entering the occupation of his choice To the child of superior ability the advantages of high-school training are stressed and he is encouraged to choose those subjects which will permit him to attend college some day should that then seem a wise plan. In some cases, conferences with parents are held to urge upon them the importance of further training for these young people of special ability, and, where necessary, scholarships are recommended. The child with meager ability is helped to make a plan suited to his needs, and others who are failing in their school work, and who are unable or unwilling to improve, are encouraged and helped to find suitable work . . .

Self-helps—The general policy of the vocational counselors at all times is not to force their plan upon the child but to lead him to think about his own qualifications and his relationship to various occupations and the training he needs to enter these occupations. Often the child has made a good plan but needs help in developing it, often he is at a loss as to where training may be secured for a definite occupation, perhaps he has never thought of the relation between a school course and the world of occupations, and frequently he knows little or nothing about occupations and has made no attempt to plan for the future. Occupational facts often persuade a child to give up a poor plan and to choose one more suited to his needs For example, a boy with a low percentile rank who was failing in his work wanted to become a doctor, but when he learned that in order to do so he must graduate with credit from high school and then attend college for six years, he was willing to make a plan more suited to his ability.

Counseling is, then, the activity where all the facts are gathered together and all the experiences of the student are focused upon the particular problem to be solved by him, where he is given direct and personal help in solving the problem. It is not solving the problem for him. Counseling should be aimed at the progressive development of the individual to solve his own problems unassisted. It is help, keyed to the ability of each student, giving him just enough help to enable him to solve his own problems but not enough to make him dependent upon the counselor; just enough help to develop his ability to do his own thinking, so that he can solve the next problem more intelligently and solve it with less help than he had before In many cases personal counseling is not necessary at all. The facts assembled, the investigations of the student, and the class discussions

give sufficient help so that the problem is already solved, the student makes his decision even without personal consultation with the counselor.

5. *Miss Bragdon's Analysis.*—Miss Bragdon has described the situation well.[1]

What General Situations Demand Counseling? With the intercreation—or at least the interaction—of the counseling process in mind, what are the situations which call for treatment through counseling, rather than through any other part of a guidance program? We submit that the following situations are those which demand counseling particularly

(1) *When the student needs* not only reliable information but an *interested interpretation of such information* which meets his own personal difficulties.

(2) *When the student needs a wise listener* with broader experience than his own, to whom he can recount his difficulties, and from whom he may gain suggestions regarding his own proposed plan of action

(3) *When the counselor has access to facilities* for aiding in the solution of a student's problem to which the student does not have easy access

(4) *When the student* is unaware that he has a certain problem but for his best development *must be aroused to a consciousness of that problem*

(5) *When the student is aware of a problem* and of the strain and difficulty it is causing, *but is unable to define* and understand it

(6) *When a student* is aware of the presence and nature of a problem, but because of a temporary strain and distraction *is unable to cope with it intelligently*

(7) *When the student is suffering from a major maladjustment or handicap* which is more than temporary, one which demands careful diagnosis by a specialist and help over a long period of time

Thus we have the counseling process meeting the following needs (1) the need for an interested interpretation of information adapted to an individual problem, (2) the need for a listening, checking-up, and advising process, (3) the need for putting into motion aids to problem solution to which the student does not have easy access; (4) the need for arousing an awareness of problems existing but not recognized, (5) the need for defining problems recognized but not understood, (6) the need for a constructive action where the student needs help in coping with a problem, and (7) the need for help in definite major maladjustments.

6. *Developing Need for Interviews* —It is sometimes difficult to get students to come for interviews. It is not desirable to make

[1] BRAGDON, HELEN D., An Analysis of the Process of Counseling, *The Vocational Guidance Magazine*, 6: 252–256, March, 1928

such interviews compulsory. Students must come because they feel a need for help. One method used seems to avoid this difficulty [1]

> All of the seniors were called together in the auditorium during the homeroom period The counselor explained to them the necessity of choosing an occupation for which one is fitted, showing them several books from the Vocational Guidance Library, and offering to lend them these books and to talk over any problem they wished to see him about.
>
> Each one was then asked to fill out a specially prepared form. *Forty-two* expressed a desire for information on one or more occupations, *forty-six* said they had not yet decided what they wanted to do, and *fifty-eight* asked for an interview .

7. *Counseling Necessary in Every Grade.*—It is probably entirely unnecessary to say that counseling is not confined to any place in the school system. It is an individual thing and should be furnished whenever a problem arises, whether this is in the seventh grade, in the senior high-school year, or in the college.

III. Homeroom Guidance

1. *The Need for Homerooms* —Homerooms are being widely adopted in our junior and senior high schools. This is a by-product of the tendency toward departmentalization In the general organization of instruction on the departmental basis, there is no provision by which any one teacher may have definite responsibility for any student for his entire work A student comes in contact with many different teachers each of whom knows him only from the point of view of the subject and the classroom There is great need for providing someone who will take a definite responsibility for each student, whose duty it will be to study him, to learn all about him, and to assist him in his adjustments to school The homeroom sponsor is the only one who has the student every day, whose duty it is to know all about his work, to study his characteristics, and to exercise a general oversight of him

2. *Organization of the Homeroom* —Homerooms are organized in different ways. Sometimes a homeroom sponsor has a group for a term or a year only, sometimes he has charge of the same group for the full time of the course. The usual plan is to have

[1] Hoppock, Robert, How to Reach More Students with Interviews, *The Vocational Guidance Magazine*, 7 42, October, 1928.

the students in the homeroom all from the same grade or class. Sometimes, however, each homeroom is a segment of the entire school, that is, each class or grade in school is represented in the homeroom Under this plan in a four-year high school, each homeroom might have twelve freshmen, ten sophomores, eight juniors, and five seniors This plan is found to work exceptionally well It does, however, make somewhat more difficult the program of group conferences, because at least some of the problems facing each class may be different

3 *The Aims of the Homeroom*.—The chief aims of the homeroom as given by McKown[1] are (1) to develop desirable pupil-teacher relationships, (2) to assist in the guidance of pupils, (3) to develop desirable ideals and habits, personal and civic; (4) to expedite the handling of administrative routine educatively

If the analysis of guidance already given is correct, each of the first three of these aims is directly concerned with guidance. Desirable pupil-teacher relationship is, possibly, the most important of all the guidance functions. This is fundamental in the adjustment of the pupil to all phases of school life and in assistance in study It is also essential in finding many facts about the pupil himself Many of these could not be discovered in any other way

The homeroom sponsor has the opportunity of knowing the members of his room more intimately and accurately than the classroom teacher can ever know them, especially in the permanent homeroom plan in which each pupil stays in the same homeroom for at least three years The relationships thus established are cumulative in their effects and provide the best possible basis for certain forms of assistance Not only does the homeroom sponsor know each pupil more intimately, but he can be of great assistance to the classroom teacher in many ways Discouragement and failure of pupils may often be prevented by information regarding home conditions, health, etc , such as only the homeroom sponsor may have Knowledge of outside interests of pupils may often be of great help to the classroom teacher in planning her work and in utilizing special interests All such information enables the classroom teacher to make more effective the assistance she gives to her pupils

[1] McKown, Harry C Home Room Guidance, New York. McGraw-Hill Book Company, Inc , 1934, pp 24–43

4. *The Place of the Homeroom in Guidance* —There is at present quite a radical difference of opinion regarding the place of the homeroom in guidance. Davis maintains that the homeroom is and should be the focal point for all guidance. The strategic place of the homeroom sponsor in the guidance program, as Davis sees it, is well expressed by the following quotation:

It is in this capacity that she comes to know each pupil in the room more intimately than any other teacher She alone has the opportunity of knowing the pupil in all his relationships his studies, his difficulties with teachers, his problems of discipline, his home conditions and environment, his associates in school and out; his attitudes, interests, and abilities Therefore, whether the school be large or small, it is with the homeroom teacher that the foundations for guidance must be laid.[1]

McKown, while not according the homeroom the central place in guidance suggested by Davis, considers it of vital importance in all forms of guidance activity:

In summary, the homeroom, because of the naturalness of its setting and situation and because of the requirement that the sponsor be a preventer of difficulties rather than a "trouble shooter" after the difficulties have arisen, can offer very definite contributions in the personal, educational, social, and moral aspects of guidance not at present very definitely or adequately provided for in the so-called curricular activities, and it can also afford opportunity for supplementation of the regular curricular work now being done in the vocational, physical, and recreational phases of guidance.[2]

Brewer, thinking of guidance as a more specialized procedure, does not consider that the homeroom has anything more than a very subsidiary function in guidance He feels that it is a job for experts only and that homeroom sponsors, by the very nature of their duties and their training, are not fitted for such an important function.

These differences are caused largely by differences in emphasis upon certain aspects of guidance or upon certain elements in the guidance process. Davis and McKown, while not neglecting

[1] National Association of Secondary School Principals, Committee on Guidance in Secondary Schools, *Bulletin* No. 19, Cicero, Ill , January, 1928, p 16

[2] McKown, Harry C · Home Room Guidance, New York· McGraw-Hill Book Company, Inc , 1934, pp 38, 39

the vocational phase of guidance, stress school and personal adjustment, Brewer stresses vocational guidance Davis and McKown are thinking more of methods of securing information about the student, his interests, his abilities, his home conditions, etc ; Brewer has more definitely in mind securing information about vocations. Both groups stress the need for definite assistance, but Brewer is thinking more of assistance in specialized problems relating to vocations and to behavior, while Davis and McKown have more definitely in mind the usual problems that arise in school and home. It is possible that the difference may be due to a more fundamental divergence in point of view

There seem to be two very definite and distinct philosophies or trends in guidance at present, the one the theory that the guidance person is a specialist working apart, rather mysteriously, behind closed doors, using esoteric practices and coming forth only occasionally to make impressive and perhaps mystifying announcements, the other the theory that the guidance person is merely a leader in a movement and an atmosphere which permeates the whole school This latter point of view presents guidance as an attitude, a way of looking at and treating the child's problem, an approach to the problem of truly educating the child [1]

These two points of view are seldom clearly defined. Certainly it cannot be said that Brewer thinks of guidance merely as a separate, mysterious process or that the counselor should be some one who is separate from the work of the school as a whole Nevertheless, there is some foundation for the statement, it does represent fairly accurately a difference in point of view that is all too common. There really is no room for such a difference, because we need both the expert and the homeroom sponsor, each has his contribution to make. The homeroom sponsor, in the real homeroom, should have much more intimate knowledge of the entire pupil than anyone else in the school system. He is, therefore, a very important part of the guidance set up; probably no guidance of any kind should be undertaken without his cooperation It is not necessary that he actually initiate every guidance activity, in fact, it is probably important that he should not do so Every part of the school system is and must be vitally concerned with assisting the pupil and must be alert to discover problems

[1] Wisconsin Teachers Association, Report of Guidance Committee, Madison, Wis Wisconsin Teachers Association, 1933, p. 29

of individuals and to initiate guidance procedures It is highly probable that more of these problems will come to the attention of the homeroom sponsor than to any other one person It is also true that the particular type of assistance needed often requires detailed knowledge and technical skill not possessed by the homeroom sponsor. When this is the case, the homeroom sponsor should not himself undertake such guidance, he should refer it to the expert who, presumably, can give the assistance needed in a more efficient manner It should be a matter of cooperation in which all the forces of the school are utilized and coordinated for the solution of the problem presented, each contributing his part and performing his peculiar function

5. *Difficulties of Homeroom Guidance*—One of the chief difficulties in considering the homeroom sponsor as the center of guidance work is the impossibility of finding anyone who is expert enough in all phases of guidance to be efficient If such a person were found, he probably would not be a homeroom sponsor, but would be the director of guidance As we have already seen, efficient guidance demands experts—experts in collecting information, in teaching, in counseling, and in all other phases of guidance Students, in some way, must have the benefit of such expert assistance On the other hand, we cannot contemplate with satisfaction sending the student who needs help to occupational experts, to college experts, to social experts, to educational experts for counsel and not providing some means of unifying and interpreting the help those experts give Such more or less unrelated counsel would be confusing in the extreme. Specialists in medicine are very necessary and very helpful, but, unless the specialist has had broad training and general experience, he is likely to be one-sided and biased in his diagnosis The coming of specialists in medicine has brought about and necessitated the specialist in diagnosis. When once the specialist knows the trouble, he can treat the case intelligently and effectively. Specialists in guidance require a diagnostician, someone who knows the student from many points of view and who can not only diagnose, but also unify the treatment. We must in some way provide for unified whole-child counsel

One of the most serious difficulties with the plan of making the homeroom sponsor the center is the general failure of school authorities to recognize the real function of the homeroom In

most schools, it is considered merely as a place where students may leave their books, to which they come when they arrive at school and before they are dismissed for the day The homeroom sponsor is responsible for keeping the records for her group, she has her pupils alone for possibly fifteen minutes each day and cannot know them intimately This situation is clearly and forcibly expressed by one of these harassed homeroom sponsors [1]

As a high-school teacher having forty young people in my homeroom, I should most emphatically say that the homeroom teacher cannot do the vocational counseling for her group These children enter the room between 8 15 and 8 30 a m , when the opening bell rings Five minutes are allowed the teacher in which to check up the attendance, then another bell sounds for the children to pass to their respective rooms At the end of the second hour they return to the homeroom for five minutes for another checking up The homeroom teacher does not see them again until five minutes before closing, when they return for a final checking up

Personally, I do not teach a school subject to any of these children who are assigned to me as homeroom teacher

My work in the English department brings me into classroom contact with 150 boys and girls, with any one of whom I am far better acquainted, as a result of being their teacher, than I am with any of my homeroom pupils A counselor especially trained for the important work of counseling, in a school where his work has the active sympathy and hearty cooperation of the members of the faculty, ought to be very much better able to do the work than the homeroom teacher

I have been particularly interested in a recent article entitled "Student Advisers," in *The Vocational Guidance Magazine* The opening sentences read "The homeroom or record teacher is the direct adviser of each pupil in the school This teacher knows more intimately than any other member of the faculty the strength and weakness of each pupil in the class"

I should very much like to know how the homeroom teacher accomplishes this miracle I confess that I have never been able to get this intimate knowledge of my homeroom group

If the homeroom sponsor is charged with the responsibility of any part of the guidance program, provisions must be made so

[1] Brewer, J M , and others, Cases in the Administration of Guidance, New York McGraw-Hill Book Company, Inc , 1929, p 189

that she may have her group alone during a period long enough to enable her to find their problems and that she may have enough time free from recitations to be able to study each individual and to make the necessary contacts with other teachers in the school. Some schools do provide for this by relieving the homeroom sponsor from part of the teaching load and by providing a homeroom period each day, or several times a week, in which real guidance may be done. Homeroom sponsors should, of course, be selected very carefully and with due regard for the special qualifications required for such work

When the homeroom is well organized under competent leadership and with sufficient time to function effectively, it can be one of the most powerful factors in the guidance program What it can do under proper conditions is admirably shown by McKown[1] in the wealth of illustrative material he gives taken from actual homeroom programs in schools scattered throughout the country.

IV. Group Guidance

1. *Meaning of Group Guidance* —Group guidance is not essentially a different method of guidance; it is inherent in many phases of homeroom guidance. It is a term that has come into use chiefly through the excellent work of Richard T. Allen in Providence, R I. It includes all those forms of guidance activities that are undertaken in groups or in classes It assumes, with reason, that there are not enough qualified counselors to provide adequate individual counseling for every pupil and, therefore, that some other means must be provided of reaching every pupil It is also believed that certain forms of assistance can be given in groups more effectively than to individuals. There are certain common problems confronting pupils that can advantageously be discussed among groups of pupils; the exchange of opinions and the different points of view presented are of material help to all the members of the class.

The course in occupations, or vocational civics, described on page 327, would properly be included under group guidance as well as many of the programs discussed by McKown in "Home Room Guidance." Here would also be included the Boston Plan

[1] McKown, Harry C Home Room Guidance, New York. McGraw-Hill Book Company, Inc , 1934.

for Group Counseling given on pages 291–295 and the Pennsylvania outline of a course in school opportunities prepared by Holbrook mentioned on pages 289–290

2 *The Purpose of Group Guidance.*—The purpose of this method of guidance has already been indicated to some extent It is further described by Allen

> The problems for discussion by the case-conference method provide practice and experience for pupils in socializing their individual opinions, in developing tolerant attitudes towards the opinions of other people, and in learning how to approach social problems in a scientific manner The purpose of these problems is to provide opportunity for the socialization of individual experience Together with the self-measurement units, they constitute a laboratory course in psychology and sociology that should become an effective parallel to the laboratory opportunities in the natural and physical sciences
>
> . .
>
> With the adoption of "group guidance" or "social and economic problems" as an approved course in the senior high schools, taught by the counselor throughout the three-year course, required in the tenth grade and elective in the eleventh and twelfth, it will be possible to improve greatly the present program of the counselors A larger proportion of their teaching load will be in the guidance field, less time will be required for individual interviews, and each counselor will have opportunity for continuous contacts with each pupil throughout the entire course instead of an occasional interview once a term or once a year Until this result is achieved, the organization of guidance in the senior high schools cannot be considered satisfactory [1]

3 *The Scope of Group Guidance*—The problems taken up in these group conferences are, naturally, extremely varied, covering all types of problem that have common elements or that may profitably be discussed in groups. Among these are problems relating to educational plans, to adjustment to school and home, to social situations, to choice of life work, to getting a job, and many others Special group investigations are initiated and brought to class for discussion. As outlined in the Providence schools, the course is given for two periods a week for three years in the tenth, eleventh, and twelfth grades

[1] ALLEN, R D, STEWART, F J, and SCHLOERB, L J, Common Problems in Group Guidance, New York Inor Publishing Co, 1933, pp 3, 4

QUESTIONS

1 What is counseling?
2 In what way is counseling basic in guidance?
3. Is the work of the homeroom guidance or not?
4 What is the function of the homeroom sponsor in guidance?
5 Is there such a thing as group guidance?
6 How is group guidance related to counseling?

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2 ALLEN, R D Case-conference Problems in Group Guidance, New York Inor Publishing Co , 1933

3 BOSTON PUBLIC SCHOOLS Guidance—Educational and Vocational, A Tentative Plan for Group Counseling in Intermediate Schools, *Board of Superintendents' Circulars* Nos 2 and 17, 1928–1929, Boston Printing Department, 1929

4 HOLBROOK, HAROLD L A Seventh-grade Course in School Opportunities, Harrisburg Pennsylvania Department of Public Instruction *Bulletin* No 28, 1928

5 NATIONAL ASSOCIATION OF SECONDARY-SCHOOL PRINCIPALS, Committee on Guidance Guidance in Secondary Schools, Cicero, Ill *Bulletin* No 19, January, 1928

Chapter XVIII

METHODS OF GUIDANCE WITH RELATION TO COURSES, SCHOOLS, AND COLLEGES

(EDUCATIONAL GUIDANCE)

I General Aim of Educational Guidance

The general aim of educational guidance is to assist individuals to make wise choices, interpretations, and adjustments with relation to schools, courses, curricula, and school life. The specific aims will be given in the section dealing with each level or type of school.

II Guidance before the Secondary School

At present, very little is done to guide pupils into or toward the junior high school or seventh grade; much is done after they get in, but little guidance is attempted in the sixth grade This is due quite largely to the general belief that pupils will usually go beyond the sixth grade The normal age for the seventh grade is from twelve to thirteen and the compulsory attendance laws do not allow pupils to drop out before they are fourteen years old and then only if they are employed The statistics of elimination given on pages 241 and 242, however, show that from 20 to 35 per cent do drop out before they reach the seventh grade This shows a real need for guidance not later than the sixth grade It is not contended that all of those who drop out should go on to the junior high school, but merely that care should be taken to give them the information and counsel that are needed to enable them to decide wisely whether they should continue in school or not Valuable information is given in the folders describing the junior high school, often printed by the boards of education. Frequently, time is given in sixth-grade classes to a definite study of the offerings of the junior high school and of the advantages that it gives In some cases the overage pupils, those who will reach the age of

fourteen or sixteen at the end of the sixth grade, are organized as a group and special care is taken to give them information and counsel about the opportunities offered by the junior high school Sometimes, as in Pittsburgh, this group is taken on a visit to a junior high school to show them what it is like. Individual counsel is very important The counselor or homeroom sponsor, knowing the ability of the pupil and his home conditions as well as something about his interests, can so organize the various factors that the pupil will receive the help he individually needs in making his choice.

III. Guidance in the Secondary School

A. Specific Aims and Purposes of Guidance in the Secondary School

The specific aims and purposes of educational guidance on the secondary-school level are as follows

1 To help the student to secure information concerning the possibility and desirability of further schooling and to develop a method by which he can determine the value of such further schooling for himself

2 To enable him to find what are the purpose and function of each type of school that he might attend

3 To help the student to secure definite knowledge of the offerings of the school that he is attending or might attend, of the colleges that he might wish to enter, and of the purpose of each course and curriculum

4 To give the student an opportunity to try out various studies so that he may gain some insight into the school life and work that is ahead in order that an intelligent choice may be made of school, of college, or course, and of clubs and other activities.

5 To enable the student to find what the requirements are for entrance into these schools and colleges and what abilities are necessary for success in them

6 To assist the student to secure such information about his own ability to do the work of the schools ahead and about his own interests in such work as will assist him in choice of school or course

7 To help the student to adjust himself to the curriculum, to the school, and to the social life connected with it

B Guidance in the Junior High School

1 *Organization of the Curriculum* —Since it is usually assumed that practically all will go into the junior high school, the major part of the guidance is left until that time. The curriculum

of the junior high school is so organized that the first two years offer little or no choice of studies, all are required to take the same work Sometimes a limited choice is given in the eighth grade, but usually the important selections are deferred until the ninth grade. The problem of guidance in the seventh and eighth grades becomes, then, (1) a problem of adjustment to the school and, (2) a problem of laying the foundation for a wise choice in the ninth grade Guidance in these two years is performed mostly by the homeroom sponsor and by the counselor

2. *Adjustments Necessary* —While the change from the elementary school to the junior high school is not so abrupt as that between the eighth and the ninth grade of the old organization, there is enough difference to necessitate a definite plan of adjustment Departmental organization, usually provided for in the junior high school, means that the pupil must adjust himself to a variety of teachers, instead of remaining in the same room for all his classes, he moves from room to room. He is plunged into a different type of school life and school discipline There are various clubs and student activities, there is usually some form of student government, the school library is usually a new experience All of these call for adjustments Most pupils adjust themselves readily, but a few do not The burden of most of these guidance problems falls upon the homeroom sponsor In the homeroom periods, she explains to her pupils the various facts of the junior-high-school organization, and discusses with them the principal problems taken up individually either by the homeroom sponsor, by the counselor, or by the principal. In the fall term of the seventh grade, membership in student clubs is usually restricted to one club into which all must go The number of activities open to students is gradually increased from the seventh to the ninth grade. The assembly period is utilized, frequently, to describe the work of the various clubs and general school life so that the students may make their choices wisely.

3 *The Pennsylvania Three-Year Course.*—An interesting and helpful plan has been developed by Harold L Holbrook[1] which provides for (1) a seventh-grade course in school opportunities, (2) an eighth-grade course in occupations, and (3) a ninth-grade course in school opportunities and occupations. The general

[1] HOLBROOK, HAROLD L , A Seventh-grade Course in School Opportunities, Harrisburg, Pa *Department of Public Instruction, Bulletin* No 48, 1928

plan of construction is shown by the outline of general topics in the seventh-grade course in school opportunities given below

THE PENNSYLVANIA SEVENTH GRADE COURSE IN SCHOOL OPPORTUNITIES

Unit I

The Junior High School and Its Program of Studies

LESSON		PAGE
1	The seventh-grade course in school opportunities	9
2 and 3	The junior high school	10
4	The aims of education and of the junior high school	10
5 and 6	The seventh grade	11

Unit II

The Value of Education

7	The money value of education	12
8 and 9	The social values of education	12
10 and 11	The cost and value of a junior high school	13

Unit III

Succeeding in the Junior High School

12 and 13	Success in the junior high school	14
14 and 15	My work-play program	14
16 to 18	How to study	15
19 and 20	Desirable personal characteristics	15
21	Cooperation in the junior high school	16

Unit IV

Educational Possibilities

22	The eighth grade	16
23	The ninth grade	17
24 and 25	The senior high school	18
26 and 27	Colleges and professional schools	18
28 and 29	Continuation, part-time, cooperative, evening, and correspondence schools	19

Unit V

Preparation Determines Opportunity

30 and 31	Success in high school as a measure of ability to succeed in college and university	20
32 to 34	School levels and occupational success	20
35 and 36	Reports on work-play programs	21

This outline provides a definite plan for investigation of school opportunities by the students themselves and a cooperative

study by students and teachers of the purpose and value of each part of the school system It also provides for a discussion of personal adjustment of the pupil to the school, of what to do and what not to do, of how to conduct one's self in the halls and on the playgrounds

An excellent textbook for the seventh grade is "Our Junior High School," by Holbrook and McGregor [1] This gives in very concrete form, with many illustrations, material for lessons designed to interpret the junior high school to the new student and help in his adjustment to it.

4 *The Boston Plan* —A more comprehensive plan for a study of the opportunities in the junior high school is that prepared by the Committee on Guidance of the Boston Public Schools [2] The material in these two pamphlets is so complete and so suggestive that the different units, together with the aims of each, are given here

BOSTON PLAN FOR GROUP COUNSELING IN INTERMEDIATE SCHOOLS

Grade VII

The seventh-grade course in Guidance is intended to acquaint children with those opportunities which the intermediate school offers them for getting an education and preparing for a place in the world's work

Unit I[3]

An Intensive Study of the Pupils' Intermediate School

Aims

1 To help pupils understand the school in which they find themselves
2. To help pupils understand the purpose of the intermediate school in a scheme of education

[1] HOLBROOK, HAROLD L, and MCGREGOR, A LAURA Our Junior High School, Boston Allyn and Bacon, 1928

[2] BOSTON PUBLIC SCHOOLS, Guidance—Educational and Vocational, A Tentative Plan for Group Counseling in Intermediate Schools, *Board of Superintendents' Circular* No 2, 1928–1929, and *Board of Superintendents' Circular* No 17, 1928–1929, First Supplement to *Board of Superintendents' Circular* No 2, Boston Printing Department, 1929

[3] A unit comprises several lessons—the number to be determined by class conditions The approximate number will usually be found upon the lesson sheets for each unit. Each unit has a series of suggested topics, not given here

Unit II

What the School Gives to Pupils

Aims

1 To help pupils understand the purpose of their education
2 To help pupils understand their opportunities

Unit III

An Intensive Study of the Relation of Attendance to School Success

Aims

1 To help pupils understand the advantages of regular attendance at school
2 To help pupils understand that habits of regularity are fundamental to success in life

Unit IV

Educational Information A Study of the Courses of the Intermediate School

Aims

1 To help the pupil understand the purpose of the course that he is taking and the possibilities it holds for him
2. To help the pupil understand that these courses are steps in his preparation for a part in the world's work
3 To help pupils make future choices of course more intelligently

Unit V

Occupational Information (Optional)

NOTE —In districts where there is a tendency to early school leaving, or where economic conditions force children into employment soon after the limit of compulsory schooling has been reached, it will be advisable to insert this unit.

Aims:

1. To acquaint children with those types of industry open to untrained workers
2 To show them how to secure promotion within these industries
3 To show them how, with further evening study, these positions may lead to advancement in other lines of employment

Unit VI

A Study of the Value of an Education

Aims

To help pupils toward an appreciation of the need for a longer and more specialized education than that of a generation ago

Unit VII

A Study of the Ways of Earning Money to Help Secure an Education

Aims

1 To help pupils appreciate the expense to their parents of a complete education

2 To turn pupils' attention to ways of helping to earn something towards their expenses

3 To induce pupils to save to pay for any further education beyond public school which they might wish to secure

Grade VIII

The eighth-grade course in guidance is intended to keep before pupils the fact that at the end of this year an important decision must be made It purposes to give them some basis for this choice Two factors affect this adequate educational and vocational information and the recognition of interest and ability

Unit I

Another View of the Pupils' Intermediate School

Aims

1 To help pupils understand the school in which they find themselves

2 To help pupils understand the part the work of the eighth grade plays in making this decision.

Unit II

An Intensive Study of the Relation of Attendance to School Success

Note —Treated more briefly than in Grade VII and from the point of view of good business rather than good discipline

Aims

1 To help pupils understand the advantages of regular attendance at school

2 To help pupils understand that habits of regularity are fundamental to success in life

Unit III

Educational Information. The Study of the Boston School System

Aims

1 To help pupils get a picture of the extent of the Boston School System

2 To help pupils get an idea of the opportunities that the city offers them in day school

3 To help pupils understand what opportunities the city offers their parents and older brothers and sisters in evening school

4 To help pupils understand why such widely varied types of schools are needed today in our system

5 To help pupils understand why in so complex a system guidance is necessary.

Unit IV

Occupational Information. A Study of the Occupational Field

Aims

1 To teach children to look forward to taking their place in the world's work
2 To teach children to understand and appreciate the necessity and dignity of work
3 To give children a broad view of the occupational field
4 To teach children to think about possible vocations which interest them

Unit V

Opportunities in the Ninth Grade

Aims

1. To help children make proper selection of courses for the ninth year
2 To ensure that all children who are considering college entrance are taking the proper units

Unit VI

Educational Information. The Value of an Education

Aims

As in Grade VII

The Ways of Helping to Secure an Education

Aims

As in Grade VII.

Grade IX

Unit I

A Study of the Pupils' Intermediate School

Note —Treated very briefly and from the point of view of using some of the activities for exploratory value

Aims·

1 To help pupils understand the intermediate schools in which they find themselves.
2 To help them to understand the relation between the year's work and the choice of vocation

Unit II

The Relation of School Work to Life

Aims

1 To help the child to see more definitely the relation of what he does at present to what he will do in the future.

2 To help the child to form consciously habits of regularity, punctuality, and industry, as definite parts of his life equipment

Unit III

Occupational Information A Survey of the Field of Occupations in Boston

See Occupation Unit in Grade VIII for Aims

Unit IV

Educational Information

Part I The Growth of Education

Aims.

1 To help the child understand that the growth of educational opportunities, not in Boston alone, but everywhere, is a part of our national life
2 To help the pupil understand that the educational system has developed because of the demand made by changing conditions of life within the community

Part II The Detailed Study of the Boston High and Trade Schools

Aims

1 To give the student a clear picture of the educational opportunities offered in Boston secondary schools

Unit V

The Relation of School Work to Life

Aims

1 To enable the pupil to see in what definite way his school work is a part of his preparation for life
2 To secure in him the right disposition toward a continuance of his education
3 To face him with the necessity of thinking seriously about his life career.

It will be seen that nearly all the units relate quite definitely to problems connected with school opportunities.

In these discussions, constant use is made of pamphlets published by the board of education describing the junior and senior high schools. A very helpful feature of these pamphlets is the suggested lesson outlines. A few of these are given in the Tentative Outline, but they are more definitely outlined in the Supplement. Each one is outlined in accordance with the better methods of curriculum construction, into (1) objectives, (2) suggested procedures, and (3) outcomes (See footnote on page 291)

This provides, more definitely than does the pamphlet by Holbrook, for investigation by students and for class discussion and study. A commendable feature is the use of actual cases as a basis for class discussion. The outline also provides for continuity of work throughout the junior high school. It should be very helpful to teachers and counselors.

5. *Experiences.*—An essential part of the program of guidance in the junior high school is concerned with getting acquainted with types of work that will be helpful in choice of courses and schools, and in personal adjustment. The organization of the curriculum of the junior high school has been made with this in mind. In the seventh and eighth grades there is little choice, but the subjects offered are chosen with the idea of giving students an acquaintance with the major fields of human activities and, more specifically, with the specialized work offered in the later years of school work. Hence, we have English, general mathematics, social studies, general science, practical arts, and, often, general language. The purpose of these is described in Chap. VIII. They perform the function of try-out courses to enable the student to gage his own abilities and his own interests, and to introduce him to the activities and the major lines of studies and courses open to him, beginning with the ninth grade. In addition to these are the short unit try-out courses, used by Briggs and others, described in Chap. VIII; these also are found helpful.

The experiences of students in these courses are utilized in class discussions and in personal interviews with the counselor as a basis for the choice of courses in the ninth grade. These choices lead directly to differentiation of work in the senior high school. We thus have provided for provisional choice, at least, of courses, and of schools after the period of the junior high schools. In personal counsel and in class discussions the homeroom sponsor and the counselor have all the information available from tests, examinations, school records, and outside studies that bear upon each individual. These guide the process of discussion and of counseling so that the needs of each individual may be met, as far as it is possible to do this. Choice of studies for the ninth grade is made in the eighth grade.

After the courses for the ninth grade are chosen and the work begun, each student has the opportunity to try himself out

for the year or a part of the year. As seen in the Boston pamphlet, this experience offers the basis for a further discussion of the offerings of the senior high school and, if necessary, a reconsideration of the tentative choice made in the beginning of the ninth grade.

During the ninth grade, definite choice of courses and curricula for the tenth grade is made. The plan of visits by junior-high-school students to senior high schools is also very frequently employed in order to give them a better idea of what the senior high school is like This helps in choice and also assists in adjustment to the new school

C. GUIDANCE IN THE SENIOR HIGH SCHOOL

1. *Readjustments Necessary*—No matter how efficiently the work of the lower school has been done, certain parts of the process of adjustment must be done by the school into which the student enters. This adjustment is made along the same general lines as that described for the junior high school It is performed by class discussions, by the homeroom, by personal counsel, by homeroom sponsor, by counselor, and by principal The school assembly is usually utilized to provide certain information of a general nature and to develop a feeling of school spirit. Talks are given by pupils, by teachers, and by the principal, chorus singing and school yells all contribute their part. Handbooks, similar to those used in colleges, are often employed, and the school paper is a great help. Personal assistance is often necessary for individual students in cases of maladjustment of student to courses. Not infrequently the student finds that the courses chosen for the tenth grade do not, after actual experience, prove interesting or profitable. Changes in plans are sometimes made imperative because of changed home conditions Readjustments must then be made. Lack of adjustment between students and teachers also needs attention. All of these are taken care of in the same way as that already described, sometimes by homeroom sponsor, often by the counselor or dean, and sometimes by the principal.

2. *Guidance in Selection of Further Education.*—The most important educational choice for which the senior high school is directly responsible is that regarding further education, especially in college, normal school, or some form of special school. This,

of course, is often made in the junior high school, but even if it is made there, much remains to be done in the senior high school.

All schools should have on hand and assembled for use the information described in Chap. XV. This information, combined with the facts about individuals obtained from school records, intelligence tests, personality ratings, and the other ways described in Chaps. V to XII, forms the basis for the assistance to be given. Here is also where the parents must continually be consulted. Students should themselves investigate different colleges and schools. Class or group discussions must be provided for in every grade of the senior high school These may well be in the homeroom, or there may be special classes in charge of the counselor or a teacher assigned for the purpose In some schools, this special work of guiding students in the choice of college or normal school is assigned, not to the regular counselor, but to some teacher who makes a specialty of this particular work. After the choice of college has been made, much remains to be done by way of securing definite information regarding courses or majors, costs, living conditions, clothing, etc , etc.

Most of the failures in college can be prevented by proper guidance in the high school. Some failures are due to inability to do the work required; these students should be advised not to go to college at all. Some failures are because the student has selected the wrong college; others are due to lack of adjustment to college life. Most of these can be prevented by proper guidance.

3 *Basis for Choice of School or College* —What should be the basis for the choice of college or other school? Many are saying that too large a number of our young men and women are going to college, and urging that we take immediate steps to reduce this number. They point to the tremendous increase in enrolment during the past fifteen years and to the appalling figures of student mortality in the freshman year We may question the validity of the argument as such, but we cannot blind ourselves to the fact of the numbers who enter college only to fail and to be forced to leave before the end of the first year. These failures are not all due to lack of adjustment, or to lack of care on the part of the college. Whatever the

cause may be, steps should be taken to prevent this tragic waste This responsibility rests upon both the secondary school and the college Part of the waste is due to wrong choice of college

The first basis for choice should be ability to do college work The important question is not, "Are too many going to college?" but, "Are those going to college who should go?" and, "Are those who should not go to college prevented from going?" In considering the question of the ability to do college work, we need to remember that colleges differ in their standards and, also, in the particular types of ability, both general and special, that are required for successful work. A student might fail at Princeton, but succeed in some other college This might be either because Princeton requires a higher ability for success (if it does) or because Princeton specializes in such a narrow range of abilities (if it does) that the particular student will fail even though he has certain very high special abilities in other lines.

We have, as yet, no reliable measures for predicting success in college This is due partly to the varying standards in colleges and partly, no doubt, to the complexity of what we call the "ability" to succeed in college Among the qualities, characteristics, or abilities most commonly accepted as determinative of college success are "general mental ability" (usually interpreted as score in mental tests), interest in college work, purpose, persistency, willingness to study, ability to get along with people. For most of these we have very inadequate measures At best they can be only roughly estimated

We are, however, warranted in saying that a student who ranks low in intelligence tests, who has low marks in high school, who shows no particular interest in study, and who manifests no high degree of persistence will almost surely fail in college work There are many persons of this kind that are found attempting to get into college and some who actually do get in

Perhaps the best method of judging probable ability to do college work is to have before one the complete cumulative record of the student through a series of years This will, in most cases, settle the question in one way or another In coming to a decision, the counselor should not be governed by any mechanical averages, but should examine the entire record very carefully for evidence of fitness or lack of fitness for college work.

Nor should we assume that all who rank high in "mental ability" will succeed in college Lack of certain fundamental characteristics, such as interest, purposes, persistency, etc., may be the determining factor

Another thing that should be taken into consideration is whether the student has a real desire to go to college or not. If he dislikes the idea, if he has no interest in college, it is a question whether he should go The problem here is sometimes that of awakening an interest So often, young people go to college merely because they are forced to go by their parents, in many cases parents have no other reason for sending their children to college than that of the social prestige that is supposed to result from graduation from college Sometimes wealthy parents send their children to college merely that they may have more or less pleasant employment until they are twenty-one or twenty-two and ready to assume responsibilities in business or ready for matrimony. These reasons may be good ones, but are obviously not the most fundamental

One of the important points to be considered in this decision is the financial ability of the student and of his parents. College education is very expensive at present and will probably be more expensive rather than less Here, again, we must remember that there is great variation in the costs State Universities charge no tuition or at most a very low one, while private colleges charge $400 a year tuition alone, and some even more than this. When confronted with the lack of financial ability to attend a particular college, the decision might be to enter some other institution or to find ways in which the financial obligations may be met This may be either by way of scholarships, of part-time jobs, or of a loan

A question that deserves far more consideration than is usually given to it relates to the particular college to be selected. Colleges are not all alike in entrance requirements, in cost, in spirit, or in opportunities offered. Proximity to the home of the student must often be a controlling factor Some students need a continuance of home influence; others need to get away from home and learn to be independent. Some need a small college; others, a large university.

Two of the most frequent reasons for the choice of a college are that the father or the mother graduated from that particular

college and that some friend, possibly the teacher or the counselor, did. This is emphasized by the propaganda organized by nearly every college and spread broadcast by the alumni "Harveton University wants the best Alumni, be on the lookout for good strong men: scholars, athletes Get hold of them, send them to Harveton" This may be entirely legitimate but the result is that Mr Brown, an alumnus of Harveton, principal of the Jonesboro High School, picks out the best students and the finest athletes and tries to influence them to go to Harveton. Now Harveton may be a good university, but it may not be the best place for these particular boys to go Alumni are very likely to want to send the best candidates to their own university, "Let the others go to Podunk College" The reasons given above are all too common, and none of them are valid. Colleges and universities do differ, in spirit, in offerings, and in suitability for certain types of young men and women. No choice should be made of a college for a student or by a student without a very careful study of the institution and of the student to determine the suitability of one for the other The decision should be made on the basis of the needs of the student and the degree to which the institution meets these needs, and for no other reason. When two institutions are equally suitable and equally good, other reasons may enter, but in no other case

In this discussion we have mentioned only colleges and universities, but the same points apply with equal force to normal schools and special types of schools. The question is altogether too vital, it means too much in the life of the individual young man or woman, to be decided upon any other basis than the needs of the individual.

Information about college entrance requirements should be known by students and parents long enough in advance of graduation from high school that subjects necessary for entrance may be taken. The parents of a fine young man had planned for years to send him to Harveton University, but when he was a senior in high school they found he could not enter Harveton because he had had only two years of Latin and four years was required Such a situation is entirely inexcusable Either the parents or the school were very much to blame: probably the blame rested on each, but mostly upon the school.

IV Guidance in the College and University

A specific aims of college guidance

The specific aims of educational guidance on the college level are as follows.

1. To assist the student to adjust himself to the conditions of work in the new institution
2. To help him in the many adjustments in ways of living and in general social relationships incident upon leaving home and upon entrance to the life of the college
3. To assist him to get a clear idea of the various curriculum offerings and the purpose of each
4. To help him to choose wisely among the athletic, literary, and social activities represented in the college
5. To assist him, if necessary, in securing part-time employment or vacation jobs by which he can earn needed money

B. methods of college guidance

1 *Joint Responsibility of High School and College.*—The same general principle of joint responsibility as that described in connection with the entrance into the senior high school applies on entrance to college The success of students in college is a responsibility both of the secondary school and of the college The high school concentrates its energies upon the proper choice of further education and upon the particular institution finally chosen; it gives such help as it may in preparation for entrance to the college, it sends to the college a carefully organized record containing the items most important for the college to know. After this the major responsibility rests upon the college. Many secondary schools go one step beyond this and follow up their graduates, at least for the first year, in order to give them all the help possible As a part of this plan, colleges are now generally sending back to the secondary school a report of the work of the student for the first term and often for the entire year. These are very valuable to the secondary school, not only in revision of its standards, when necessary, but in providing the means for assisting the student in the perilous first year of college

2. *Freshmen Week.*—Colleges are awakening to the necessity for more careful supervision and assistance to the incoming student They realize by sad experience that young men and women thrown on their own responsibility for the first time, away from the restraining influence of parents and high-school

teachers, need guidance, they need help not only in choosing courses but in personal adjustment to their new environment. Accordingly, many institutions have inaugurated a program for the incoming student This usually consists of several days of intensive work before the college opens. It is called "Freshmen Week" or "Freshmen Days" One of the first institutions to begin this practice was the University of Maine. The original program used in 1924, now considerably shortened and modified, provided for a full week's program and consisted of inspection of the buildings and campus, lectures, tests and classifying examinations, and entertainment. The outline of activities as listed is given in full. These activities were in the charge of different members of the faculty and were very helpful

I LECTURES

Subject

1 Taking notes and examinations
2 Use of library
3 Use of books
4 College duties and responsibilities
5 The colleges
6 College students, day's work and college customs
7 Cultural reading
8 Social conduct
9 Current university problems and honor societies
10 Hygiene and physical training
11 Higher obligations of life

II EXERCISES, TESTS, ETC

Number of Periods	
4	Chapel
5	Individual photographs
8	Recreation
2	Physical examination
2	Campus inspection
1	Practice in use of books
2	Practice in use of library
2	Psychological tests
2	Mathematics tests
4	Exercises in English
1	Chemistry test or lecture
4	Field day
37	

III. Evening Program

Date	Activity
Tuesday	General welcome to Freshmen
Wednesday	Motion pictures at Orono
Thursday	Athletic rally and songs
Friday	Stunt night
Saturday	Dance and games
Sunday	Vespers
Monday	Organization of class

Similar in general purposes is the three weeks' course in the techniques of study given by the University of Buffalo to all entering freshmen who have not done well in high school, but who wish to take a college course.[1] The various aspects of the course that were considered by the students to be most helpful are given in the order of their value

1. Practice in taking notes from lectures
2. Writing English themes, with conferences
3. Lectures on purpose, habits, memory, and attentiveness
4. Drill in rapid reading with comprehension tests
5. Training in assimilating the contents of books
6. Partial review of intermediate algebra
7. Training in the use of the library
8. Oral reports on outside reading
9. Experiments in memorizing lists of foreign words
10. Drill in taking notes from difficult and abstract mimeographed excerpts from textbooks.

The results of this three weeks' course are reported to be very satisfactory, and students have been able to adjust themselves to college life and requirements much more quickly than formerly.

One of the most effective variations of this general plan is the one organized by the Oregon State Agricultural College, Corvallis, Ore. The Educational Exposition, as it is called, was initiated as an organized institution for vocational guidance by Registrar E. B. Lemon in 1923. It has developed to a point where it is one of the outstanding conferences in that section of the country. In 1931, over 700 boys and girls representing nearly all the secondary schools in Oregon attended the two-day conference. These students were sent as delegates from the various schools and were

[1] Jones, Edward S., The Preliminary Course on "How to Study" for Freshmen Entering College, *School and Society*, 29. 702–705, June 1, 1929.

entertained by the college. The purpose and methods are well described in the *Oregon State Monthly* for February, 1931.

The Education Exposition stimulates interest and understanding of vocational guidance by four chief methods

1 The exhibits and demonstrations, prepared and operated by students of the schools of the college with a view to showing some of the different types of training offered at this institution. The great majority of these exhibits are highly informing To the serious-minded they give a definite picture of the work presented.

2 Through general convocations and conferences of all delegates, addressed by the visiting vocational guidance specialists The purpose of these gatherings is to present the general principles of guidance and to inspire students with a spirit of serious self-analysis and thought regarding their educational and vocational careers.

The speakers are always men and women of broad scholarship and wide educational outlook They are not merely specialists in vocational guidance technique but educators in the largest sense Hence, they afford all students an unbiased and thoroughly constructive message Regardless of whether or not the listener plans to go to college, therefore, or of what type of college he may have in mind to enter if he looks forward to a college career, the message he receives is equally valuable to him

3 The separate daily conferences for boys and for girls, affording opportunity for more intimate counseling by visiting specialists, members of the college faculty, and high-school delegates, both students and faculty Questions are freely asked and answered, and discussion, while kept strictly to the point, is open and general This is usually the livest and most valuable element of the Educational Exposition.

4 Conferences for faculty people and student advisers, where college and high-school teachers meet together with a view to such mutual understanding that the expositions from year to year shall meet the real needs of students and carry a vital and thoroughly constructive message

Other features of the conference include athletic contests, debates, social entertainments, conferences with deans of schools and heads of departments, administration of tests by guidance experts, and exhibits of vocational guidance literature and tests. The effort is to give them a glimpse of college life, to show them what the work of the different departments is and what occupations they lead to, and to stimulate them to think carefully about their future educational and vocational plans. By no

means all who attend the exposition enter the state college; the service is considered as a service to young people and not simply as a feeder for the state college.

Other institutions, especially engineering schools, have inaugurated similar programs on a smaller scale, usually limiting them to one day only.

3. *Personnel Departments*.—In addition to this preliminary work, many colleges have organized personnel departments for the special purpose of assisting the individual student in his adjustment and in preventing failures. These departments make use of all sorts of tests—intelligence, achievement, character, temperament, etc.—the information regarding scholastic standing, character, and general interests contained in the blanks sent by the secondary school is utilized and the records of the student in college are constantly referred to. Personnel directors arrange personal conferences with students who are in trouble of any kind, assist in improving study habits, and give very useful help of all kinds. Often "How to Study" courses and "Orientation" courses are organized with the purpose of assisting the student in his adjustments. In the various ways described here, the new student is assisted to make the adjustments necessary in the first year of college work. The results of this form of guidance are very satisfactory. The enormous elimination that formerly took place in the freshman year has been greatly reduced and many handicaps that prevented first-year students from getting a good start have been removed.

4. *Orientation Courses*.—The orientation courses described on page 257 are also used in many colleges and found to be extremely helpful.

V. Stay-in-school Campaigns

1. *Aims of Stay-in-school Campaigns*.—Closely related to that part of guidance concerned with choice of school and adjustment to it, is the effort directed toward keeping children in school, especially after the compulsory attendance age. This has come to be called the "Stay-in-school Campaign." It is directed toward children, parents, and employers and has for its purpose selling the idea of the value of further schooling and the handicaps of the uneducated and untrained. It is also closely related to guidance in the choice of an occupation.

This campaign sometimes takes the form of a definite, intensive drive for a limited period—in Education Week or at some time when a special need develops. It is, at present, more frequently a steady, consistent program of propaganda directed through class work and assemblies, through parent-teacher associations, through Rotary Clubs, and similar organizations Its purpose is, in general, (1) to sell the idea of the value of education and the dangers of lack of education, and (2) to emphasize the attractiveness of the school, the pleasure that students will get by attending school

2. *The "Money Value of Education"*—In the outlines of class work given on pages 290 to 295 of this chapter, a prominent place was given to the values of education These values are frequently emphasized by the use of charts, cartoons, posters, and illustrations of all kinds that are displayed on the bulletin boards and hung up conspicuously in different parts of the building. They are often displayed in business offices and public buildings in order to arouse the interest of parents and employers. Most of these charts are based upon material in "The Money Value of Education"[1] A few samples of those most commonly used will be given in order to indicate their general character and to point out certain difficulties and dangers in their use These are taken from "The Money Value of Education" and from other charts used in different cities.

Poster No 1
What Four Years in School Paid[1]
Wages of Two Groups of Brooklyn Citizens

	Age at Leaving School	
	Fourteen	Eighteen
At fourteen...	$200	
At sixteen.	$250	
At eighteen	$350	$500
At twenty	$475	$750
At twenty-two	$575	$1,000
At twenty-four	$600	$1,150
At twenty-five	$688	$1,550
Total salary 11 years	$5,112 50	
Total salary 7 years		$7,337 50

It Pays to Continue Your Studies

[1] The Money Value of Education, *U S Bureau of Education Bulletin* 1917, No 22, Washington Government Printing Office, 1917

The first poster tells its own story of the relative wages received by those who remained in school until eighteen as compared with those who left at fourteen

The second poster shows the opportunity of the college trained man and the extent to which college men rule the nation

POSTER No 2

EDUCATION AND STATESMANSHIP[1]

Less than 1 per cent of American Men are College Graduates yet this 1 per cent of College Graduates Furnishes

50 per cent of our Presidents
35 per cent of the Members in Congress
47 per cent of Speakers of the House
54 per cent of the Vice-Presidents
62 per cent of the Secretaries of State
50 per cent of the Secretaries of Treasury
67 per cent of the Attorneys-General
69 per cent of the Justices of the Supreme Court

50 per cent of the Men Composing the Constitutional Convention were College Graduates

The third poster attempts to show in dollars and cents what each day in school is worth.

POSTER No 3

HIGH SCHOOL—WE PAY $9 25 PER DAY[1]

If you ever hear of a boy or girl who wants to quit school, when it is unnecessary, if you ever hear of parents who are thinking of putting their children to work, when it is unnecessary, just bring these figures to their attention

Every day spent in school pays the child $9.25

Here is the proof based on the wage scale of 1913

Uneducated laborers earn on the average $500 per year for 40 years, a total of $20,000

High-school graduates earn on the average $1,000 per year for 40 years, a total of $40,000

This education required 12 years of school of 180 days each, a total of 2,160 days in school

If 2,160 days at school add $20,000 to the income for life, then each day at school adds $9.25

The child that stays out of school to earn less than $9 a day is losing money, not making money

[1] The Money Value of Education, *U S Bureau of Education Bulletin* 1917, No 22, Washington· Government Printing Office, 1917

In the fourth poster we see again the handicap to the young man or woman who does not have at least a high-school education.

POSTER No 4

YOUR OPPORTUNITY

Have you ever stopped to think how many opportunities are closed to you if you do not complete a high-school education?

The world today wants men and women who are trained

The high school offers a training that is necessary for entrance into nearly all of the professions and skilled occupations

It is a most excellent preparation for the boy or girl who does not wish or cannot afford to go to college

If one does not graduate from high school he cannot go to college.

He cannot go to a state normal school in most of the states.

He cannot go to a first-class law school

He cannot go to a first-class medical school

He cannot go to a first-class dental school

He cannot go to a first-class pharmacy school

He cannot go to a first-class engineering school

He cannot be admitted to a Naval School of Aviation

He cannot be admitted to an Army Aviation School

He cannot get a first-class position in a newspaper office

He cannot get a place in any business office with unlimited opportunities for advancement

Get a high-school education It is the foundation for success Without it you will be seriously handicapped, with it you will be far better prepared to make your mark You must learn if you wish to earn Rewards are paid for knowledge The high school offers you an opportunity to get a fair start towards success

The last poster shows the tragic experience of a girl who left school in the first half of the ninth grade.

Figure 22 is another poster used very frequently. This shows at ten-year periods the relative salaries of men with different education after graduation up to sixty. The differences seen are very striking. Figure 23 shows another phase of the same situation. Here the differences in salaries of graduates of the same institution are compared It shows very clearly that the larger salaries at every age period are given to men of superior scholarship.

POSTER NO 5
SHE WAS A 9B GIRL
She dropped out at 15 years 1 month
And this is what she did

Factory Work	$11 56, 6 weeks, 2 days—laid off
	Idle, 4 weeks
Clerical Work	$11 00, 6 weeks, 4 days—laid off
	Idle, 2 weeks, 2 days
General Office work	$10 00, 3 weeks—not steady
	Idle, 2 weeks
Switchboard	$10 00, 1 week, 4 days—not steady
	Idle, 2 weeks, 3 days
Factory work .	$12 00, (?)

This is a record of six jobs in seven months She got jobs that paid good wages, but she was not steady or capable enough to hold them

Time—28 weeks 3 days Work 16 weeks, 6 days Idle 11 weeks, 4 days

Average wage $6 80 a week At sixteen she was doing factory work again, another temporary job The time she wasted at $6 80 a week would have completed her first year high school, and helped her to gain steadiness and reliability

3 *Fallacies in Data* —These posters, arranged in striking headlines and accompanied with pictures of the handicapped boy
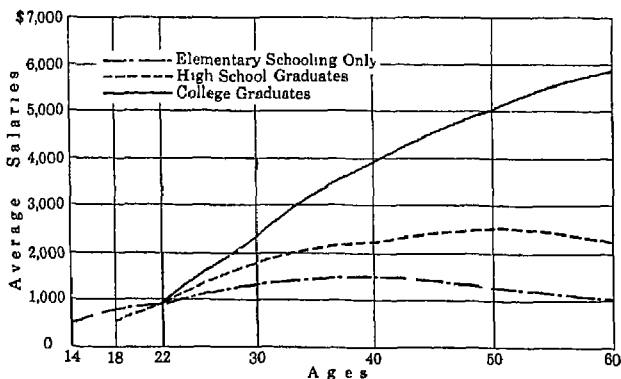
FIG 22 —Money value of education (*Adapted from Everett W Lord*)

or girl, are used very widely Their use has been severely criticized on the ground that they are not true. The manifest implication to be drawn from the way in which the material is presented and from the specific statement in the third poster is that those who graduate from high school will receive higher

wages than those who do not, that a college education enables one to earn more money, that is, that the cause of the greater earning power is the increased education received There can be little doubt that college-trained men, as a group, are receiving higher salaries than those who are not college trained and that they are holding more important positions as a group No one denies this. The point of dispute is whether they are getting
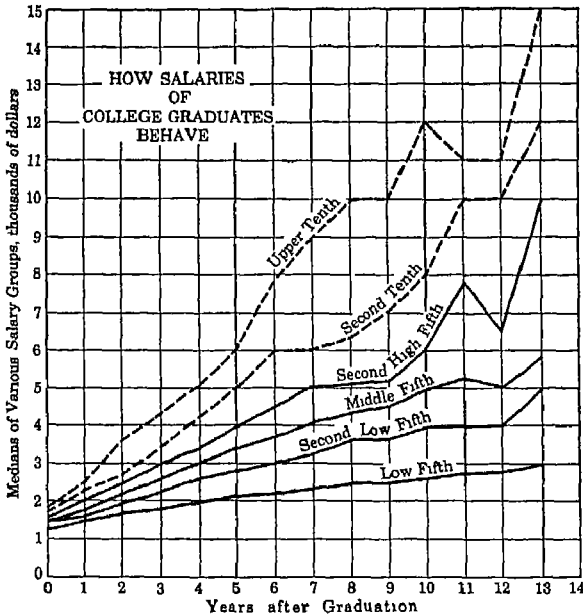
FIG 23 —Rates of increases in various salary groups of recent Massachusetts Institute of Technology men (*Adapted from Anthony Annoble, from The New York Times, March* 19, 1933)

higher salaries *because* they have a college education or whether it is merely because they were better men and would have received the higher salaries anyway, even if they had not had the college degree There is no proof of either contention, but the presumption favors those who contend that the higher salary is due to superior ability: that is, high school and college act as agencies for the selection of the abler men and women, the less able drop out because they cannot do the work There can be no question that those who go to college are, as a group, higher in ability than those who do not. There are, of course, many who do not

go to college who are as intelligent, as able as any who go to college, and among college students one finds a number who are very mediocre, but it has been amply demonstrated that the college group is superior. Consequently, if we could select 100 young men of equal ability, send 50 of them to college and 50 into occupations, we probably would find at the end of 20 years not so much difference in income as that indicated by the figures; but *we might*, college training may make a difference, and probably does, but as yet we do not know definitely Used in this way the material is fallacious and may possibly be harmful.

4. *Legitimate Use of Data* —There is, however, another way in which some of the same material may be used without involving this fallacy of selection. It is very apparent that there is a general increase in the amount of general education demanded for certain types of jobs. If a boy goes to a business man today and applies for a job, one of the first questions asked is, "Are you a high-school graduate?" If he is not, explanations must be made. That is, the business man is looking for his employees among high-school graduates If the boy applying has not graduated, he must display some unusual ability or qualifications in order to get the job. In other words, he is at a disadvantage as compared with other boys who have the same, or even less, ability but who have completed high school. It follows, then, that if the boy wants to give himself a fair chance, he will graduate from high school, and so put himself among the group to which the business man naturally goes for employees. It is the same with college education For certain kinds of position, employers, by common consent, go to the group of college graduates for candidates If you are not a college graduate, you must do something unusual to have as good a chance as they, even though you know you can do the work as well as they A mature woman with several years of very successful experience in church and social work found her way to advancement blocked because she had never graduated from college. There was no question of her ability to do the work, but it was the unwritten requirement that college graduation was necessary for the important positions Accordingly, she very sensibly gave up her position and went to college, sitting in the same classes with young, immature girls, taking work that was far below her ability and totally unnecessary for her, in order that she might give

herself a fair chance, that she might place herself in the select class of college graduates. She may have been better qualified for her work after she had received her college degree than she was before she went to college, but the difference was probably quite small. What did make the difference was that she had *proved* that she was of college graduate ability, that she had fulfilled the requirements placed for the job.

From this point of view some of the tables and charts have real value. They show the difference in income, in position, and in opportunity between those who keep on in school and those who do not. Such posters as 1 and 3 are definitely misleading and should not be used. Poster No. 2 and others like it can readily be used if we emphasize the slogans "Make sure that you put yourself in the class to which employers go for the kind of job you want." "Give yourself a fair chance in life." Poster No. 4 splendidly illustrates the handicap placed upon one who is not a high-school graduate if he has any ambition to do any of the things referred to or to go into the occupations for which this training is required. Poster No. 5 definitely pins its faith in the school as an agency that increases steadiness and reliability and increases efficiency. This is not so objectionable as posters 1 and 3 for it does not compare those who stay in school with those who drop out and thus avoids the fallacy of selection. Schools should increase steadiness and reliability, but one may question whether such a result is inevitable. The message in this poster is clear, however, and cannot do harm.

5. *Results of Campaigns.*—Stay-in-school campaigns have resulted in the reduction of elimination and have helped to sell the idea of extended education. Their value has often been questioned on the ground that everyone should not be in school, that it is best for some individuals and for society that they go to work rather than remain in school as schools are now organized. This is undeniably true and until schools are greatly reorganized from the elementary school to the college to meet the needs of all types of students, the needs of many of those who now drop out will not be met. But it is also true that the quickest and surest way of securing reforms and readjustments to meet the needs of those who drop out is to *have these students in the schools.* If they are in school we must take care of them, when they are not in school, we too often forget them. Efforts to keep children in

school, and school reorganization to meet their needs should go on together

Stay-in-school campaigns are helpful, then, because they extend the good influence of the schools to many who would not otherwise obtain an education, because they place the young person in a more advantageous position for securing a position, and because they hasten desirable reforms in our schools

QUESTIONS

1 What should one know about a school before he enters it and what can best be learned after he gets in?

2. Is the lower school responsible for the student after he has entered the higher school?

3. What are the factors that make for success in school?

4 What constitutes success in school?

5 What is the purpose of college entrance requirements?

6 To what extent is this purpose now achieved by our present methods?

7 What dangers are there in wholesale stay-in-school campaigns?

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Chapter XIX

METHODS OF GUIDANCE WITH RELATION TO OCCUPATIONS

(INSTRUCTION, TRY-OUT, AND EXPLORATION)

I. General Aspects of Vocational Guidance

1 *The Unity of Guidance.*—Vocational guidance has been defined as the assistance that is given in connection with "choosing, preparing for, entering upon, and making progress in an occupation." It would be well to stress again the point already made many times, that it is impossible to separate sharply the vocational aspects of guidance from the educational, moral, and cultural aspects. In choosing a school or a course, the future occupation often bears a large part, but not always. Occupational choices depend frequently upon educational background, and they are often concerned with health, social, and cultural problems The counselor cannot, and should not, try to keep the various aspects of guidance entirely distinct. This would be working directly contrary to that unity of character and personality that is essential In spite of this unity and the impossibility and undesirability of separating vocational guidance from other forms, it is helpful to consider certain parts of vocational guidance separately from other forms Sometimes the vocational aspect stands out so clearly that it dominates everything else—civic, moral, cultural aspects shrink into comparative insignificance. Often, choice of occupation and getting a job are absolutely necessary and prerequisite to everything else—good citizenship, culture, and even good character itself Recognizing the impossibility of complete separation, we shall attempt in this chapter and the next to stress the methods that are commonly used primarily to assist in choice of occupation, in getting a job, and in becoming adjusted to the job

2 *The Specific Aims of Vocational Guidance* —The specific aims of vocational guidance may be stated as follows.[1]

1 To assist the student to acquire such knowledge of the characteristics and functions, the duties and rewards of the group of occupations within which his choice will probably lie as he may need for intelligent choice

2 To enable the student to find what general and specific abilities, skills, etc , are required for the group of occupations under consideration and what are the qualifications of age, preparation, sex, etc , for entering them

3 To give opportunity for experiences in school (try-out courses) and out of school (after-school and vacation jobs) that will give certain facts about conditions of work and that will assist the individual to discover his own abilities and help in the development of wider interests

4 To develop in the student the point of view that all honest labor is worthy and that choice of occupation should be based upon the peculiar service that the individual can render to society; upon personal satisfaction in the occupation, and upon ability, remuneration, possibility of advancement, and the like

5 To assist the individual to acquire a technique of analysis of occupational information and to develop the habit of analyzing such information before making a final choice

6 To assist the individual to secure such information about himself, his abilities, general and specific, his interests, and his powers as he may need for wise choice and as he himself cannot obtain

7 To assist economically handicapped children who are above the compulsory-attendance age as well as college students to secure, through public or private funds, scholarships or other financial assistance so that they may have opportunities for further education in accordance with their vocational plans

8 To assist the student to secure a knowledge of the facilities offered by the various educational institutions for vocational training and the requirements for admission to them, the length of training offered, and the cost of attendance

9 To help the worker to adjust himself to the occupation in which he is engaged, to assist him to understand his relationships to workers in his own and related occupations and to society as a whole

10 To enable the student to secure reliable information about the danger of alluring short cuts to fortune through short training courses, selling propositions, etc , as represented by current advertisements, and of such unscientific methods as phrenology, physiognomy, astrology, graphology, and the like, and to compare these methods with that of securing really trustworthy information and frank discussion with experts

[1] Many of these aims are taken directly from the list of aims formulated by the National Vocational Guidance Association (See *The Vocational Guidance Magazine*, 7 219, February, 1929, and 8 227–235, February, 1930)

3. *General Methods of Vocational Guidance.*—The methods used may roughly be classified into (1) instruction, (2) exploration and try-out, and (3) counseling. Instruction includes all organized class activities of the school that are directed toward helping students acquire a knowledge of occupations, helping them to develop attitudes, ideals, and appreciations. These activities comprise class exercises, student investigations, general talks, etc.

Try-out and exploration have for their purpose obtaining personal experiences in activities, lines of work, and study that are similar to those among which choice must later be made in order that the choice may be made with a more complete knowledge of factors essential to an intelligent choice. Opportunities for try-out and exploration are often given in the regular class work and may be included under instruction, but the purpose is somewhat different. The purpose of instruction is largely the formation of habits, the development of skills and attitudes, the acquisition of knowledge. Try-out and exploration stress activities—experiences of students—that show the individual what he can or cannot do, what his interests are, that widen his range of interests and open up to him lines of work with which he was not previously acquainted. The difference between instruction and try-out is thus largely one of purpose and of emphasis.

Counseling refers to the direct assistance given personally to an individual student by a teacher or counselor; it is directed definitely at the individual and usually takes the form of personal talks with classroom teacher, homeroom teacher, principal, or counselor. The distinction between this method of guidance and that of instruction and try-out was made more fully in Chap. XVII, where the art of counseling was analyzed and described.

In this chapter, we shall deal with methods of studying occupations through instruction and try-out experiences. We shall find it convenient to deal with the different levels of school experience separately, as was done in Chap. XVIII.

II. Vocational Guidance in the Elementary School

1. *Methods of Guidance, Instruction.*—The method used in the elementary school to assist in occupational problems is chiefly

that of instruction The purpose of this instructional work is that of laying a background for understanding occupational life and its significance. Definite occupational information of the kind that is useful chiefly in choosing an occupation or getting a job is entirely incidental and unimportant except for those, relatively few in number, who will almost surely drop out of school at the end of the sixth grade We should not think of this instruction as something that is to be added to our elementary program merely for the purpose of assisting in vocational guidance. The general point of view that will be taken in connection with practically all the instructional work described here is that all work introduced into the school, elementary or secondary, must be worth while in itself for other purposes than merely that of guidance Our effort should be directed toward utilizing for guidance purposes the material and the activities that are organized for the aims of general education. Thus, in the elementary school, the chief problem is to utilize the various occupational elements now present in the curriculum or that should be introduced and that, when introduced, will make the elementary school curriculum richer and more efficient for general education purposes

2 *Material in Modern Textbooks* —The recent emphasis upon the selection of material from life situations for all the subjects in the elementary curriculum indicates what might be done In arithmetic, actual life problems in solving all sorts of mathematical work are selected in place of the "puzzle problems" of the arithmetic. In geography, emphasis is placed upon occupations, upon social situations, upon trade routes, upon the influence of climate upon life, social and occupational, instead of upon the location of far-away and unimportant places. History stresses peace instead of war and traces scientific and industrial development as related to problems of the present; civics deals with problems of local government, with occupations, with school life, and with local problems Modern readers, basic and supplementary, are full of interesting and helpful stories dealing with phases of occupational and civic life Some readers attempt to describe various types of occupations in such a way that the pupil may get some idea of what the worker actually does and of the value of the occupation. Other books, like those of Katherine

E. Dopp,[1] try to show the principal facts in the industrial and social development of the human race. The experience of the race in industrial and social processes is the groundwork of the series.

3 *Dewey's Experimental School*—A more thoroughgoing attempt to do this was that made by Dewey in the University Elementary School, University of Chicago. Here, occupations were made the articulating centers of school life. This centering of the work upon occupations "gives the point of departure from which the child can trace and follow the progress of mankind in history, getting an insight, also, into the materials used and the mechanical principles involved."[2] Three main lines of work were utilized: (1) shop work with wood and tools, (2) cooking, and (3) work with textiles, sewing, and weaving. All other work—arithmetic, reading, writing, history, geography—grew out of and was organized around these occupational activities.

4 *Industrial Arts.*—The development of industrial arts in the elementary school offers an example of how the work of the elementary school may be used as a background for occupational assistance and guidance. At present, practically all school systems of any size have some form of industrial arts in the elementary school. The general purpose and objectives of this work, at its best, are well stated by Bonser and Mossman.[3] The chief purpose of this work in the elementary school is a general educational one and is stated thus:

> The materials, processes, and conditions of production, and the purchase and use of the products of the more important industries may be studied for the values which such study affords in one's everyday life, regardless of his occupation. . . . The purposes or outcomes of the general study are realized in the degree in which it helps one to become efficient in the selection, care, and use of the products of industry, and to become intelligent and humane in the regulation and control of industrial production. This study is from the point of view of the

[1] DOPP, KATHERINE E., Industrial and Social History Series, Chicago: Rand, McNally & Company. Book I, The Tree Dwellers, Book II, The Early Cave Men, Book III, The Later Cave Men, Book IV, The Early Sea People.

[2] DEWEY, JOHN, The School and Society, Chicago: The University of Chicago Press, 1915, p. 18.

[3] BONSER, F. G., and MOSSMAN, LOIS C., Industrial Arts for Elementary Schools, New York: The Macmillan Company, 1923, pp. 6, 7, 14, 15.

problems, opportunities, and obligations of the consumer and the citizen.

The objectives are given under five general heads, as (1) health, (2) economic, (3) art or æsthetic, (4) social, (5) recreational The specific statement of these is as follows.

1. To be aware of general health needs. to select and use food and clothing wisely, to keep well; to keep clean
2 To buy and use industrial products efficiently
3 To love that which is beautiful, to select and use objects that are beautiful
4 To be sensitive to the well-being of industrial workers and to respond intelligently to efforts directed to help regulate industrial relations so that no injustice will be done
5 To have permanent interests in the materials and processes, products and achievements of industry
6 To secure reasonable dexterity in handling materials, tools, machines, and products found in the general environment, to be able to do or to direct simple repair work

The subject matter suggested for achieving these objectives is outlined under the headings·

1 Foods
2 Clothing
3 Shelter
4 Utensils
5 Records
6 Tools and machines

It will readily be seen that such a course in industrial arts would afford a splendid background for vocational choices Not only should it develop useful habits and skills and teach useful facts, but, what is even more important, it should develop attitudes toward industrial occupations that would be very wholesome and would go far toward counteracting influences that inevitably develop later on

5 *Course in Civics.*—As we near the end of the compulsory period the need for more specific instruction increases It is for this reason that many school systems now have a course in civics for the sixth grade in which a general study of occupations is included. One of the best examples of this is the civics course in the Philadelphia schools.[1] The distinctive aims of the civics work in the sixth grade are

[1] PHILADELPHIA PUBLIC SCHOOLS, The Course of Study in Civics, Grades One to Six, Board of Public Education, Philadelphia, 1927, p 44.

1 To develop in the child a proper pride in his city because of the important part which it plays in the industrial world
2 To give him information which will help him to select wisely an occupation
3 To bring him to see the desirability of continuing his education as long as possible so that he may become a more intelligent worker and a better citizen

In the lower sixth, those industries for which Philadelphia is noted are studied, and in the upper sixth other industrial, commercial, professional, and miscellaneous occupations are taken up Conditions of work involving compulsory education, employment certificates, the protection of workers, and continuation schools are discussed Ethics in business is also considered, including keeping a position, how to advance, courtesy in work, and fitting in with other people.

The child who goes into industry should do so with his eyes open The blind alley occupations should be treated in such a manner as to cause him to see how undesirable they are No worthy trade should be treated disparagingly The effort should be so to treat each topic that the child will see how much to his advantage it will be to fit himself for the vocation in which he will be happiest and able to render the best service [1]

When possible, classes are taken on visits to different occupations. More frequently, small groups are sent on such visits and report back to the class.

No attempt is made to deal in a comprehensive manner with occupations or with occupational problems It is, however, a vital course in civics that, at the same time, provides a background for vocational study and occupational choice. It should be noted that this is a course required of all—not merely of those who will leave school at the end of the sixth grade.

6. *Counseling* —While the instructional work outlined above is all that is necessary for the majority of pupils, the over-age group already mentioned must have definite counsel. They are the ones that will leave school and enter occupational life For them, provision should be made for counsel. This may be done in small groups and individually In such personal conferences, the teacher or counselor should have all available facts

[1] PHILADELPHIA PUBLIC SCHOOLS, The Course of Study in Civics, Grades One to Six, Board of Public Education, Philadelphia, 1927, p 48

about the pupil—his work in school, his records in various tests, the economic condition of the home, and everything else that may bear upon his problems. The interests, problems, and plans of the pupil are discussed and help given both in choosing an occupation and in securing a job. The basis for actual choice, the methods of placement and of follow-up, will be discussed later.

III. Vocational Guidance in Junior and Senior High Schools

By the nature of the case, most of the major problems of vocational guidance are located in the junior high school. This is true because the majority of pupils who leave school do so before the tenth grade is reached and because curriculum choices that involve broad selection of occupations must be made at the beginning of the ninth grade or during the ninth grade. On this account, more attention will be given to methods of assistance in different phases of occupational problems in the junior high school than in other parts of the system. Most of those are typical of methods used elsewhere.

A. Methods of Instruction

1. *Utilization of General Materials.*—Again let us emphasize the point already stated, that our problem is not so much to introduce new material primarily for the purpose of guidance as to utilize the entire work of the school organized for general educational purposes, and, when possible, to use the occupational approach to vitalize and motivate and make more efficient all school work. When we approach it from this point of view, we are at once confronted with an almost bewildering richness of material. The general subjects, even as usually taught, are full of valuable materials for guidance purposes; the opportunities they offer are almost unlimited for new material and new methods that would vitalize them and considerably enlarge their usefulness. Some of the ways in which these subjects are now being modified and used for vocational guidance purposes will be described. Since the opportunities of the senior high school do not differ materially from those in the junior high school, we shall include in this discussion the entire school.

There are abundant opportunities in geography, in history, in physics, chemistry, and biology for further desirable emphasis upon industry, agriculture, and other occupations. It is difficult to teach any of these subjects without definite reference to the occupational side, but when the instructor understands the guidance value of his subject he will find hitherto unexplored opportunities to enrich and vitalize the materials of his subject General science can hardly be taught effectively without stressing certain phases of occupational life and occupational problems Civics and economic courses often lay their foundation in occupational situations. Probably the general subject that has the greatest possibilities for guidance is English, both English literature and English composition

A very suggestive and helpful method for the use of various school subjects in vocational guidance has been worked out in Henrico County, Virginia, under the leadership of Bessie M Mottley, Director of Guidance in Henrico County:

> Henrico County school officials and teachers have recognized the need for better teaching in order that the child may be better prepared to fill his place in a progressive society. They believe that guidance should permeate and motivate, to some extent, the entire curriculum; therefore, interested county high-school teachers were organized into committees to study and to work out plans of correlating guidance with the subjects already included in the high-school program of studies The term guidance is used here in its broadest sense, including educational, vocational, moral, civic, and social guidance [1]

Such bulletins have been compiled in commercial subjects, English, French, history and social studies, home economics, Latin, mathematics, and science. Each bulletin begins with a statement of the objectives of such a correlation of the subject with guidance. This is followed by detailed suggestions to teachers of ways in which the subject may be useful for guidance purposes, lists of topics are given with references, and stimulating questions are suggested. These booklets show the possibilities for such correlation and open up alluring possibilities in every school subject.

2. *Material in Supplementary Reading Lists* —The lists of books for supplementary or outside reading should and often

[1] Foreword of the bulletins on various school subjects. In mimeographed form only

do contain books that deal with various phases of occupations. These books must, of course, be chosen for their literary value as well as for their contribution to the study of occupations They may stress qualities and characteristics necessary for success in occupations or they may give definite information about occupations. The following list is a sample of a few books of this kind:

ATKINSON, ELEANOR Johnny Appleseed, Grosset & Dunlap

Story of a man who planted many apple orchards in the Ohio Valley after the Revolution

FERBER, EDNA· Roast Beef Medium, Grosset & Dunlap.

Story of the business adventures of Emma McChestney, the traveling saleswoman, who successfully competes with men.

BEACH, REX The Iron Trail, A. L Burt Company.

Describes the building of a railroad into the copper regions of Alaska. It is very good to illustrate the work of civil engineering

ROLT-WHEELER, B · Boy with the U. S Foresters, Lothrop, Lee & Shepard Company

Describes U S Forestry service The story is subordinated to the descriptions

BASSETT, SARA WARE· The Story of Iron and Steel, Penn Publishing Company

Depicts life in the steel mills and gives a fair idea of several of the steel trades Story barely sufficient to carry descriptions

EATON, W P Peanut, Cub Reporter—W A Wilde Company

A fair picture of the difficulties in the way of one who enters the field of newspaper work Popular with boys

PEATTIE, MRS ELIA· Lotta Embury's Career, Houghton Mifflin Company.

Story of a girl who went to Chicago to study music Shows the difficulties in the way of one who would really succeed as a vocalist

MARTIN, GEORGE MADDEN: Emmy Lou, Doubleday, Doran & Company, Inc.

Story of a little girl's experiences in school and how she misunderstood things Shows how teachers fail to make children understand

WRAY, ANGELINA W Jean Mitchell's School, Public School Publishing Company

Story of a slender young woman in gray linen who possesses to a marked degree the elements of a good teacher For persons thinking of taking up teaching

A very helpful list of books that could be used in this way is given in "Vocations in Fiction, An Annotated Bibliography," by Mary R Lingelfelter and Marie A. Hanson, published by the American Library Association, Chicago, 1932. This contains a list of 349 books and is carefully annotated.

3 *English Composition.*—An excellent example of the use of English composition for assistance in vocational guidance is the plan used in the Pittsburgh high schools In the required work in English composition for the junior high school are included various general topics relating to occupations and occupational choices The outline of the work will be given as an illustration of what may be done.

ENGLISH COMPOSITION[1]

Vocational Guidance Topics

7-B *A* Aim To learn the pupil's interests and environment in order to stimulate his ambition

B Content Suggested topics.

Suggested topics are

Things I Have Made

The Shows We Have Given

How I Help at Home

7-A *A* Aim To stimulate ambition

B Content Topics along industrial, commercial, and professional lines

Lives of inventors, industrial leaders, professional men such as Edison, Westinghouse, Langley, Brashear, Watt, Ford, Schwab, etc

a How has his life contributed to progress and betterment of the world?

b Has his life made him happy? Why?

c What do you like about his life?

8-B *A* Aim To awaken a realization of individual characteristics and of possibilities for future development

B Content Topics to awaken realization of self

Suggested topics

My Ideal Man (or Woman)

My Hobby

Why I Have Chosen My Course

8-A *A* Aim To turn student's thoughts to the opportunities for choice of life work

B Content Suggested topics

The Equipment Necessary for Success

My Physical and Mental Equipment for My Chosen Vocation

[1] *Vocational Guidance Bulletin*, Pittsburgh Public Schools, Pittsburgh, Board of Public Education, 1922, pp 54, 55.

9-B *A* Aim To develop idea of social service
B. Content Suggested topics
What Can I Do to Improve Condition of Our Street to Make It More Attractive?
Does Courtesy Pay at Home? In Business? In School? In Social Life? In the Street?
What Special Opportunities for Service to My Community Does My Chosen Life Work Give Me?
How Can I Be a Successful Student?

9-A *A* Aim To appreciate the personal value of continued education
B Content Suggested topics
What Work is Open to Me at the End of My Junior-high-school Course? Contrast with Enlarged Opportunities of Graduate of Senior High School
Importance of High-school Education
Arguments for Continuing High-school Course.
Conduct toward clerks—hired help
Some good moral principles
Character in vocation

Other topics are also suggested for the senior high school.

Davis[1] organized work of a similar nature in the Central High School at Grand Rapids, Mich He believes strongly in the life-career motive as a vitalizing factor in all school work Whether or not we can agree with him in his extreme emphasis upon this motive, we must admit that the life-career motive should be more frequently used by teachers of English composition to provide topics of vital interest to pupils and to motivate investigations into occupational problems

4. *Industrial Arts.*—Industrial arts, including home economics and various kinds of shop work, give definite training in work very closely related to certain types of occupation and thus provide very valuable data for guidance purposes. While no school can or should exactly duplicate conditions in trade and industry, yet the similarities in operations and in skills are sufficient to give the student decided assistance in occupational choices. Further contributions of these subjects to guidance will be discussed under exploratory and try-out courses.

5. *Vocational Civics* —The need for a definite study of occupations has resulted in the general introduction into our junior high schools of the vocational civics course This is variously

[1] DAVIS, JESSE B, Vocational and Moral Guidance, Boston Ginn and Company, 1914, pp 238–297.

placed Often, it is the first semester of the ninth grade The course outlined by Holbrook[1] for the seventh grade is only partly on vocations. the one used in the Boston school[2] is spread over grades 7, 8, and 9. There is no uniformity regarding its place in the junior high school. The plan used in Boston has much to commend it. Elimination of pupils occurs throughout the junior high school and such a plan is better adapted to the needs of all pupils who drop out than if it were placed in any one of the grades Grade 7 is a bit too early, grade 9 is too late, and grade 8 is a mere compromise. One of the chief obstacles in the way of the usefulness of the course in vocational civics is that it too often is made elective The exigencies of college entrance requirements have often operated to restrict this to those who expect to take up commercial, agricultural, or industrial occupations. It is a course that is equally valuable for everyone and should be so placed and so administered that everyone would be obliged to take it. This is a further argument for spreading it over the three years.

The purpose of this course and the materials used have both undergone considerable change within the past few years This is due to the uniting of two forces or movements each of which outlined work for the junior high school. One of these was the vocational or vocational guidance movement that stressed the necessity for giving definite information regarding occupations to pupils preparatory to the choice of occupations. The other was the community civics movement that stressed the importance of developing an understanding of important institutions through which society functions. The strictly vocational point of view resulted in courses with such titles as Occupations, Vocations, Life Career Classes, etc ; these stressed the more or less detailed study of occupations The discussions usually centered around the following topics:

1 Importance of the occupation.
2 Work done
3. Income

[1] HOLBROOK, HAROLD L , A Seventh-grade Course in School Opportunities, Harrisburg, Pa *Department of Public Instruction, Bulletin* 48, 1928, pp 5, 6

[2] BOSTON PUBLIC SCHOOLS, Guidance—Educational and Vocational, A Tentative Plan for Group Counseling in the Intermediate Schools, *Board of Superintendents' Circular* No. 2, 1928–1929, pp 6–9.

4 Preparation required
5 Advantages and disadvantages
6 General qualifications.

The study of each occupation followed the same outline; after one or two had been studied in this way, the work became quite uninteresting and tiresome, both to pupils and to teachers It is difficult to arouse interest in a mass of details, especially among students who have no immediate intention of entering the occupation studied. To be sure, whenever a boy or girl is thinking seriously of entering such an occupation, such details are of absorbing interest, but it is doubtful whether this is the best method of approach to a general class study.

The community civics movements stressed institutions, especially those most intimately affecting the home and the school It dealt with occupations but only in their social and civic aspects. Miss Clark has called attention to the need for uniting these two movements She would take as the starting point the institutions rather than the occupations. She says.[1]

> When the course is conceived of from the angle of the work-world or economic world, the discussion centers around the many functioning institutions in the same manner as the newer political civics handles its material The bank, cooperative store, or factory, for example, may be treated as institutions functioning in the economic order And the workers, who actually carry on and cause the institutions to work, can be made the center of approach From this point there is an easy transition to the facts about the worker How did he get there? What training did he need? What attitudes must he have to further the undertaking? All pupils should study these institutions, but all do not need to study the details about every worker

This does not meet the needs of those who are going to work at once, but such pupils need the personal help of the counselor in any case, and such detailed investigation and discussion of occupations may be taken up with the counselor either individually or in small groups. For the pupil who will not leave school soon, as Miss Clark suggests.

[1] CLARK, FLORENCE E , The Use of Occupational Studies in the Classroom and in the Personal Interview, *The Vocational Guidance Magazine*, 7. 294–301, April, 1929

. the specific facts would fade by the time he has need for them, and, should he remember them, they would perhaps be out of date anyhow [1]

Whether Miss Clark's views are correct or not, and they seem very reasonable, we must admit that we have not yet developed a satisfactory method of giving occupational information to students. Inadequate as are our present studies of occupations, they are some distance in advance of our ability to use the facts effectively. One of the greatest needs today is the devising of ways by which the occupational information we already have may be used to advantage by the teacher and counselor. Dr Cleo Murtland stated this well in her introduction to the program on Occupational Studies.[2]

As the list of studies mounts, attention has been directed to two distinct needs if studies are to be used one, that occupational information must be presented to meet the needs of pupils of differing levels, the other, that teachers, counselors, and others who share the work of guidance and counseling need help in using occupational information effectively.

May Rogers Lane wisely contends that occupational studies should gather facts for the entire occupation, that occupational content should be a unit, that these should be in the form of monographs. The application of these facts to school problems, she says, is an entirely different matter. This calls for teachers' manuals and suggested outlines of application for teachers and pupils.[3] Miss Lane has written such a manual that will prove to be very helpful [4]

On the whole, the tendency is a wise one, it leaves the definite, detailed study of occupations to group or individual counseling and takes up only the larger social and economic questions in the class in vocational civics. A very good method for giving definite occupational information is to provide for it in the various classes most closely related to the occupation For example, in the class in advertising, discuss the various

[1] *Ibid*, p 297

[2] Reported in *The Vocational Guidance Magazine*, 7 217, February, 1929

[3] LANE, MAY ROGERS, Occupational Studies of 1927 and 1928, *The Vocational Guidance Magazine*, 7 312–313, April, 1929

[4] LANE, MAY ROGERS, Manual to Accompany Vocations in Industry, Scranton, Pa International Textbook Company, 1929.

things the advertiser does; in the course in secretarial work describe what different kinds of secretarial work there are, and in bookkeeping, business law, and office practice the same thing may be done.

6. *Investigations by Students*—Whether the definite study of occupations is taken up in the class as a whole, or whether it is considered only in group counseling, there are certain helps that are generally used One of these is investigations by individual members of the class These investigations may take the form of interviewing employers regarding the needs and qualifications of the worker, studying the wages of employees, or the methods of organization of workers, the importance of the occupation, the general surroundings of the job or any other phase of occupational study We should distinguish carefully between this type of investigation by the students and the investigation of occupations by experts described in Chap. XVI. The distinction there made will bear repeating briefly. The investigation by experts is for the purpose of finding *facts* about occupations These facts are to be collected and organized in such a way that counselors can use them in the guidance of students The object is to obtain reliable facts. The purpose of the investigations by students is not primarily to discover new facts, although this may sometimes result, but to develop certain attitudes, to develop certain habits, to secure certain experiences that will help them in their occupational choices In other words, it is merely a teaching device The counselor or teacher must know the facts, at least in the large, before allowing the students to investigate. If he does not know the facts, he cannot check the investigations, he cannot know whether the things the student finds are facts We need both forms of investigation, but no good can come from confusing the purposes of one with the purposes of the other. The investigation by students is like that done in history classes when topics are assigned to students for investigation No new facts of history are discovered, but the investigation is a very helpful device for the purposes of instruction.

7. *Visits to Factories and Shops.*—Another device often used is that of visiting various industrial and commercial establishments. When well organized, this has proved to be very helpful. The best results are obtained by careful cooperation with the

heads of these establishments In this way the teacher may find what parts of the shop can be visited, what can be seen, and when the visits may be made The teacher can give the superintendent or foreman a clear idea of what is wanted and, sometimes, even an outline of what would be helpful by way of explanation. Definite preparation of the class should precede the visit in order that they may know what to look for and that they may have a sufficient understanding of the operations to enable them to ask intelligent questions. After the visit the results should be discussed in class conferences and certain important truths brought out clearly. Sometimes the conditions are such that the class as a whole cannot visit the shop, but must be divided up into small sections.

The chief difficulties with this method are

(1) That the time and expense involved in visits of whole classes are often so great as to make it impossible in all but a few cases.

(2) There are usually only a few establishments that will cooperate with the schools in such visits. In some, the processes are secret and in others the conditions of the shop are such as to make visits impracticable.

(3) A third difficulty often experienced is that the dirt, noise, and confusion are so great as to be decidedly disturbing elements, often obscuring entirely the operations themselves and creating a lasting dislike in the students for the occupation.

8 *The Use of Motion Pictures.*—Many of these objections are avoided by the use of motion pictures The advantages of this device are (1) they can be used at any time the class needs them and used over and over if necessary; (2) the time and expense are greatly reduced, for the occupation is brought to the class, (3) the pictures may be slowed up so as to show the actual operation; (4) the elements of dirt and noise, as well as of danger, are removed There are also some disadvantages, such as (1) inability to appreciate all the conditions of the occupation due to removal of noise and dirt, (2) inability to secure enough films to show the necessary occupations. Heads of industrial establishments are chiefly interested in advertising their products, not in the showing off of their workers; accordingly, while it is comparatively easy to secure films showing industrial products and machinery, it is quite difficult to secure films showing workers

at work There are many films showing products but relatively few showing processes and still fewer showing what the workers really do and how they do it There is at present, however, an ample supply of excellent films for all practical purposes. These can often be obtained for the mere cost of transportation Slides and pictures are also very helpful although they lack the reality of the motion picture [1] One of the best sources for useful visual aids is the "1,200 set" prepared for the exhibit at the meeting of the National Vocational Guidance Association in Cleveland, February, 1929 This set contains 200 views of mining and mineral industries, 200 agricultural views and 800 views of manufacturing industries.

9. *Talks by Business Men*—Another device sometimes employed is to bring men and women prominent in different kinds of vocations to the school for talks on interesting and important phases of their occupation The presence of such persons in the school helps to focus attention upon the occupation. Sometimes such talks are very helpful, but it is difficult to secure just the right type of man or woman. Often, the efficient employer or superintendent is not a good speaker; sometimes such men take the opportunity to deliver an address or preach a sermon or do something other than to tell about their occupation It is usually best to let the speaker know in advance just what you wish him to do and furnish him with an outline of the points that should be emphasized. The class should be prepared in advance for the talk and the points raised by the speaker should be discussed later in order to make the most out of the occasion

The difficulties of using outside speakers are considerably reduced if the groups are small and composed only of those interested in the occupation. In Minneapolis, Miss Wright reports a very successful plan of this kind worked out in cooperation with the Kiwanis Club.[2] After finding the vocational interests

[1] There are many firms that put out valuable films and slides Among the best are the following The Acme Motion Picture Projection Company, Chicago, Ill This firm will furnish for twenty-five cents a catalogue of free films and their sources, the DeVry School Films, Inc , 131 West 42d Street, New York, and 1111 Center Street, Chicago, produces reels of various occupations Lesson sheets accompany each subject, The Keystone View Company, Meadville, Pa

[2] WRIGHT, BARBARA H , A Method of Using the Group Conference as a Guidance Device, *The Vocational Guidance Magazine*, 7 26–33, October, 1928.

of members of the senior class, they are grouped according to these interests and a request for speakers is sent to the vocational guidance committee of the Kiwanis Club The speakers are very carefully selected and conferences are arranged. Before the conferences, the students are especially prepared by talks and readings. Since the conferences vary in size from eight to forty-five students, the talks are very informal and opportunity is given for questions The speakers are usually coached, more or less, by the counselor regarding the points in which the students are most interested The plan seems to work very well and has much to commend it.

10. *The Use of Biographies.*—The use of biographies has often been advocated and many biographies contain rich material for conference and for individual investigation. Kitson[1] suggests a method of making such studies more effective. It is concerned mainly with the steps the man or the woman took in arriving at the position he finally occupied in his vocation.

THE USE OF BIOGRAPHIES

Biography is a highly dramatic source of such information During the past year I have been developing a method of using biography as an instrument of vocational guidance. I have prepared an outline which the pupil can follow, and after he has studied the lives of a few workers in an occupational field, he will have a pretty clear idea of the work he might do in that field and how he may prepare for it. The outline consists of a series of questions which the pupil answers by studying the biography. I shall illustrate with a presentation of the work of the journalist based on a study of the life of S S McClure

OUTLINE FOR THE STUDY OF A BIOGRAPHY

Study of the Journalist, S S McClure, as recorded in "My Autobiography" by S S McClure, New York Frederick A Stokes Company, 1914

At what age did he decide to enter this occupation? *Twenty-five* (*p* 150)

What was the most influential factor leading to this decision? *He was offered a job in this field* (*p* 150)

What other occupations did he seriously consider? *None*

In what other occupations did he engage before entering his final occupation? *Farmer* (*pp.* 44, 64), *teacher* (*p* 133); *peddler* (*pp.* 102 *ff.* *and* 128 *ff*)

[1] KITSON, HARRY D, Guidance a Major Problem of Secondary Schools, *University of Pennsylvania Bulletin* Vol XXIX, No 38, Sixteenth Annual Schoolmen's Week Proceedings, Philadelphia University of Pennsylvania, p 391

At what age did he enter his permanent occupation? *Twenty-five* (*p* 150)
What was his first job in this field? *Editor of house organ* (*p* 148)
How did he get his job? *Asked for it* (*p* 147)
How much money did he make per month in this job? *Not stated*
How long did he remain at it? *Six months* (*p* 161)
What was his second step on the ladder? *Business for himself* (*syndicate*) *at the age of twenty-seven* (*pp* 166 *ff*)
How much money did he make here? *Nothing the first year, about the sixth year the business netted approximately* $4,000

Make a vocational ladder showing

a Number of rungs on the ladder
b Earnings at each step
c Length of time spent at each step
d Age on attainment of each step

	Age	Earnings
Magazine owner	35	
Syndicate owner	27	
Editor house organ	25	

SOCIAL AND ECONOMIC HISTORY

What was the nationality of his parents? *Irish* (*p* 1)
Were they poor, rich, or in comfortable circumstances? *Poor*
Occupation of father? *Carpenter*
At what age did he (the subject of this biography) begin to support himself? *Eleven*
At what age was he married? *Twenty-six* (*p* 26)
Did his wife give any special assistance? *Care of office and assistant editor* (*p* 175)
How many children? *Four* (*p* 121)
At what age did he die? *Still living*

Educational History

How many years did he spend in general education? *Twenty-one, with intermittent recesses taken in order to obtain funds*
How old was he when he completed his general education? *Twenty-five*
What was his favorite subject in school? *In elementary, arithmetic and history* (*p* 17), *in college, Greek and mathematics* (*p* 68)
At what age did he begin his technical education? *There was no school of journalism at that time*
How far from home did he go for his advanced education? 200 *miles*
What was his customary academic standing in
a General education? *Third in college class*
b Technical education?
Did he earn his own way through college? *Yes, entirely*
Did he go in debt for his education? *No*

This plan opens up many delightful and interesting possibilities. It is comparatively simple and there is abundant material in nearly every library. Of course, it is necessary to be careful in the interpretation of such material. The steps

taken by a Lincoln in the course of his life cannot apply equally well to young men in this century; social, economic, and industrial conditions change, and the preparation considered essential in 1860 has been largely superseded However, used with care, the biographical material is very suggestive and helpful.

11. *Pamphlets* —In many school systems certain important facts have been taken from the investigations of occupations made by experts, and presented in a form that would help the student in his consideration of various occupations. Good examples of this form of assistance are the outline of the course in Occupations in the Providence Schools and the Occupational Studies, Monograph Series, in the Pittsburgh schools. These give in condensed form some of the important facts about selected occupations and are used as outlines for study and class discussion Folders used in the schools in Chicago, Cincinnati, Baltimore, and a number of other cities aim more directly at the student. The Chicago four-page folders have on the outside of each a picture of the worker or of some phase of the work and a caption such as "Do you want to Teach? Start Training Now" Inside is given the usual outline of information about the occupation. On the last page is given a brief list of books to be read and the advice given, "*Consult the vocational adviser in your school or visit the vocational guidance bureau*" The Pittsburgh schools prepare mimeographed sheets to give each student on various occupations. These are headed "Are you Planning to Be a . . . ?" Brief information is given about the character of the work and the qualifications of the worker In many cases, as for law, medicine, etc , advice is given about the courses to be taken in the high school in preparation for the occupation These are used in the course on vocational civics or as material for group counseling or distributed directly to students and to parents.

B. TRY-OUT AND EXPLORATORY COURSES

1. *The Scope of Try-out Courses* —Another phase of guidance in the secondary school is connected with try-out and exploratory courses. These have been described in Chap VIII It was there pointed out that there is little opportunity in the first two years of the junior high school for separate try-out courses and that we must rely very largely upon the required subjects

in the core curriculum for try-out and exploration. The fact was also emphasized that these required subjects, especially the general subjects, general science, general mathematics, general language, and general social studies, are rich in opportunities for try-out and exploration. In addition to these general subjects, there is further opportunity given in the electives offered To be effective as try-out, such courses must be offered before the time of choice of occupation or of the curriculum leading to the occupation Schools do not usually offer electives in the seventh grade but begin the electives by a limited offering in the eighth grade. Here a choice is usually given of foreign language, junior business training, or further work in industrial arts In the ninth grade, while preliminary choice of curriculum must be made, many other electives are offered, and it is still possible to change one's curriculum when he reaches the senior high school. But these furnish try-out and exploration mostly for further school work. While they give useful occupational information, they do not afford much opportunity for direct try-out in definite vocational lines Many schools try to meet this need by offering short unit courses in various fields as a means of exploration. In the description of the work in the schools of Okmulgee, Okla, in Chap VIII, pages 129 and 130, quite a variety of such courses is listed. These range from English-Latin courses to definite vocational shop work Pittsburgh[1] offers try-out courses of two kinds: (1) all boys who enter the seventh grade are given their shop work in the "general shop"

In the same way, the general mathematics and general science aim to cover a wider field of subject matter in those respective sciences than was formerly done, so the general shop provides the boy with a taste of not merely one type of hand work, but five or six Here will be found equipment for teaching printing, wood turning, wood bench-work, simple electrical wiring, sheet-metal work, and light machine work. Boys in these classes are kept on one kind of work about five weeks at a time and are then moved on to some different kind of work. By the time a boy has had four hours per week for a semester or longer both teacher and student have had a fair chance to find out whether the boy has any aptitude at all for shop work, and if he has, in which kind he will probably do his best work

[1] PITTSBURGH PUBLIC SCHOOLS, Pittsburgh Board of Education, *Vocational Guidance Bulletin*, 1922, pp 29–31

(2) Boys electing the Technical Course in the eighth and ninth grades are given a rotation of shops. Each boy is scheduled for one shop for four hours per week for ten weeks At the close of this time, he is moved to another shop until he has had in each of the type shops an opportunity to try work which is more advanced in character than that which is offered in the general shop. These two try-out courses give very valuable information for the counselor and helpful experience to the boys, themselves, they illustrate nicely the impossibility of separating the various phases of guidance in actual practice Each phase is distinct, both phases of guidance require both forms and both *at the same time*

2. *Student Clubs and Activities.*—In addition to the subjects outlined in the curriculum, the various clubs and student activities furnish an opportunity for tryout and exploration that is often very useful in occupational choice. The school paper, in both its editorial and its business aspects, enables students to test themselves and to find whether they have any real interest and ability in writing, in editorial work, or in managing the financial side of the paper The music clubs and orchestra and glee club give real exploratory experiences for occupations involving musical ability and interest. Other clubs, such as the radio club, science club, art club, camera club, etc , also give a chance for exploration in a somewhat more unconventional atmosphere than do the regular studies. They also provide for a wider range of activities than the regular curriculum. Where the vocational try-out objective is included, the organization of these activities may be made much more useful and effective.

3 *Out-of-school Jobs.*—Another source of tryout and exploration that has been previously mentioned is that of out-of-school jobs and vacation jobs. Not only can the work done by students around the home and in casual jobs be utilized to help the student understand himself, but the counselor can often provide such opportunities for the student. No school shop can exactly duplicate real shop conditions and shop atmosphere. When the boy tackles a real job, he secures real experience. This experience will show him what the trade or industry demands of its workers and will reveal interests and abilities To secure the maximum benefit, such out-of-school work should be carefully followed up and supervised; without such follow up and supervision the more

or less desultory vocational experience obtained in these jobs is often either wasted entirely or made positively injurious.

4. *Supervision of Try-out Activities.*—In considering the value of try-out and exploratory work, we should bear in mind that such work is not in and of itself valuable; there is nothing inherent in it that makes it worth while It must be made valuable and will bring in adequate returns only when carefully organized and supervised. Because a boy works on a delivery wagon, he does not necessarily receive experience in business that will help him; because a girl sells aluminum utensils from house to house, she does not necessarily get points of view that will help her decide what she wants to do. The results may be, and often are, purely neutral; a positive aversion to all kinds of employment may even be produced. Just as we may be in the most wonderful historical surroundings and not be benefited by it unless their presence and significance are pointed out to us, so a boy or a girl may be in the midst of valuable occupational experiences and never realize it unless these experiences are pointed out and their significance revealed. Mere experience seldom helps, supervised, directed experience is essential if the greatest value is to result.

IV. Vocational Guidance in College

1. *Attitude of Liberal Arts Colleges.*—Colleges and universities have done little in an organized way to assist their students in their vocational choices Professional schools, such as schools of education, teachers colleges, law schools, dental schools, and schools of medicine, take for granted that the entering students have already chosen their vocation. They offer courses calculated to train for certain vocations, but take little responsibility beyond this. Liberal arts colleges are, for the most part, organized and administered without reference to vocations. Some affirm that a liberal education has nothing in common with vocational training; that a student cannot get the maximum benefit from a college course if his mind is filled with thoughts about preparation for a vocation. This attitude precludes any vocational study or vocational assistance.

2. *The Development of College Guidance Work.*—Influenced by the steadily increasing financial difficulties and the competition with large, well-endowed state universities, both of which

necessitate a campaign to secure a larger student body, and influenced also by a clear recognition of their responsibility to society for the training of leaders, some liberal arts colleges have departed from this traditional attitude and are giving serious consideration to ways and means of assisting students in their vocational choices

Some, like Grinnell College, have established departments of Vocational Guidance for the specific purpose of assisting students in the study of vocations and helping them in their vocational choices. The most common agency established is the personnel department. This department, while primarily intended to help in the selection of students for entrance and in the adjustment of them to the college life, nevertheless, does often give incidental help in vocational guidance. The help given by these agencies is largely that of counsel and was discussed in Chap. XVIII.

3 *The Junior College* —The reorganization of secondary and collegiate education on the junior-senior college plan materially assists in the solution of the problem of vocational guidance in the college. The University of Chicago has been organized on this basis since its foundation, and many other universities have adopted the plan. This provides for a common basis of work for all in the first two years of the college and for more complete specialization beginning with the junior year. This makes it possible to organize the work of the freshman and sophomore years in such a way as to provide for exploration and try-out work like that of the junior high school. After two years of such work, carefully supervised, the student should be able to choose his major work and his occupation much more intelligently than under the present plan. This advantage is more theoretical than real at present, for, as a rule, colleges and universities have not yet seen the possibilities of the plan nor recognized its importance for purposes of guidance.

While colleges and universities as a whole have not yet begun to realize the need for assisting students in making their vocational choices, some few are doing pioneer work and are selling the idea so well that rapid progress will undoubtedly result.

QUESTIONS

1 In giving instruction in vocations, how can we avoid prejudicing students for or against certain occupations?

2 What fallacy may there be in the statement, "Jacob Riis prepared himself for his life work in such-and-such ways, therefore this is the best preparation for me?"

3 How early in the school course should instruction in occupations be given? What are the criteria for determining this?

4 Are the purposes of a liberal education opposed to that of vocational preparation? Why?

5 What are the limitations of try-out and exploratory work in school?

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Chapter XX

METHODS OF GUIDANCE WITH RELATION TO OCCUPATIONS (*Continued*)

(CHOOSING AN OCCUPATION, PLACEMENT, AND FOLLOW-UP)

I. The Choice of an Occupation

1. *Responsibility for Choice.*—It may be well for us to discuss briefly how the choice of an occupation should be made. The point already emphasized many times should again be repeated—the choice must not be made *for* the student by the *counselor* It really should be made in a cooperative way by frequent conferences between parents, student, and counselor. It is the duty of the counselor to assist in the way that has already been described, but the responsibility for choice does not rest and cannot rest with the counselor; it must be borne by the student or his parents.

2. *Important Elements.*—In making this important decision, certain elements should be taken into consideration both by the counselor in his assistance and by the student in his choice There are many lists of these elements now in print Among the most important are

1 Suitability for the occupation, involving ability, physical, and mental characteristics
2 Service to society
3 Satisfaction in the work
4 Financial returns, immediate and future.
5 Opportunity for employment
6 Opportunity for advancement
7 Health conditions
8 Social conditions.

This list differs in some respects from that given on page 328 Either form may be used; the chief difference is due to the difference in function of the two lists: the one given on page 328 serves as an outline for the study of an occupation; the list here

given stresses the elements to be taken into consideration in the choice of an occupation

3. *Service to Society*—It is obvious that first in importance stands the ability of the student to succeed. Does he have the intelligence, the specific abilities, and other characteristics necessary for success? Included in this are the necessary education and training required. Almost equally important are service to society, and joy or satisfaction in the work itself. These two are very close together in importance, but service should come first Social contribution is fundamental and the joy that comes from consciousness of being of service is a higher joy than that coming from mere pleasure in the work of the occupation. But it should be clear that if we are to expect young people to choose occupations with reference to service, such choice must come after long training in the home and school that *emphasizes service.* If the child is trained to be selfish, to get his own way, and to think only of himself, we cannot expect that he will choose an occupation for service His choice will surely be primarily for financial returns and for advancement, with the added idea of an occupation that involves as little actual effort as possible

4 *Joy in the Work.*—But joy in the work is a very important factor. One should, if possible, choose an occupation that interests him, in which he can get joy and satisfaction. This not only makes possible a greater expenditure of energy but also provides for individual development and individual happiness Vocational guidance has often seemed to take for granted that the majority of workers are dissatisfied with their work, that it is distasteful to them. Hoppock's investigation[1] casts some doubt upon this assumption. Apparently, satisfaction with one's work may be acquired; one may even come to like an occupation that was originally distasteful or for which one is unsuited But we must admit that some types of occupation provide very little possibility of enjoyment on the job Probably only morons can really enjoy the endless, "year-long, age-long" repetition of purely mechanical processes. The earnings of such jobs are often higher than those of other types of job. What, then, is the worker to do? Let us in this connection remember that the

[1] HOPPOCK, ROBERT, A Report on Studies of Job Satisfaction, to be published by the National Occupational Conference, New York.

occupation is only a part of the life of every individual. It is not all of it, even though some would have us believe it is. It may not even be the most important part of life. If we are to be faced with considerable increase in the number of automatic machines, with the consequent speeding up of production and a four-hour day and five-day week as some predict, it may be that some man, or some woman, will and should deliberately choose an occupation that is purely mechanical, in which there is no joy for him, because by so doing he can earn enough money to support himself and his family and *spend the rest of the time in doing something that he does enjoy*—his avocation. The important thing is that *somewhere* in his life he shall experience joy in doing things, he shall have satisfaction in his work Not a few strong men, successful in their work and respected by all, have deliberately given up their occupation and have gone to a remote place, taking their books with them They have been content to make a bare living by trapping or gardening so that they could be free to read, to meditate, to enjoy the things that to them really counted for most. Were they wise in their choice? Who shall say? Perhaps they have "chosen the better part" and it shall not be taken away from them The point to be emphasized here is merely this. that in choosing a life work, the whole life of the individual should be taken into consideration. Adams, in "The Epic of America," voices the belief of a constantly increasing number of thoughtful men when he casts doubt upon the prevailing American philosophy of work and efficiency as basic for modern society.

5 *Time of Choice.*—The problem of when the choice of occupation should be made is a perplexing one. Some maintain that all children should decide before they enter high school; others think the decision should be made before they enter college, and most people agree that it should come before they finish college. A moment's consideration will clearly show that no absolute rule can be made Obviously, choices should usually be made before the child leaves school But children leave school at very different times. At least two-thirds never complete high school, and probably not more than 10 out of 100 of those who complete high school ever finish college. The time of choice, then, in the sense of choice of a specific occupation, must vary Some children should choose an occupation by the time they are

in the eighth grade, others can safely delay it until they are well along in their college course. Present conditions indicate that the choice may wisely be deferred at least until the end of the junior high school. The best advice to give is not to rush the choice, go slow, consider carefully, watch and wait. As a matter of fact, in most cases the choice is made in a progressive way by progressive elimination. If a child drops out of school before high school is completed, his choice is restricted to those occupations for which high-school and college courses are not necessary He is at once ruled out of the professions. Again, if he does not go to college, the higher professions are closed to him. Theoretically, the farther a person goes in school, the more occupations are open to him, but actually the farther he goes, the more restricted the choice usually is That is, the boy who goes to college points toward the higher professions or certain forms of business. His choice is progressively restricted so that when he completes college the choice is not so difficult as it might seem

6 *Provision for Choice and Rechoice.*—Provision should always be made in school for choice and rechoice. The first choices of the student are not necessarily final Investigations differ in their findings regarding the permanency of vocational interests of children All studies agree, however, that there are many changes in choice during the years of the secondary school Early choices should be regarded by the counselor as purely provisional. They should be utilized always in the study of occupations and in the study of the student who has made the choice They provide some of the best types of motivation for study. Not all students should be urged to select an occupation while in high school, as has already been pointed out, remaining in school for further study almost automatically restricts the choice We need educated men and women in all lines of occupations, however, especially do we need intelligent leaders in industry, and college-trained men should consider carefully the possibilities of leadership in industrial work. The opportunities in *all* lines of work should be clearly revealed to students in high school and college We do not wish to make any distinction in honor or value among occupations; all should be considered equally worthy. It is very apparent that different occupations or different jobs in the same occupation call for varying degrees of intelligence and general ability. A distinct social waste and

individual unhappiness, as well, usually result when a man with a high degree of intelligence and large general ability spends his energies in a job or an occupation that does not utilize this intelligence and ability. When possible, people should select occupations, or jobs in occupations, that call for their highest ability, and provision must be made for them to secure work in such occupations. Since success in school and college is indicative of superior intelligence and, perhaps, high general ability, the college-trained men and women should go into occupations or jobs that can utilize these abilities. These are what are called the "higher" occupations or managerial positions in industrial occupations. On this account, continuance in school itself is a method of restricting the choice of occupation.

7 *A Suggested Use of Mental Test Scores in Occupational Choice* —Many attempts have been made to use the material collected from the result of the Army Alpha tests The results of these tests are by no means satisfactory as measures of ability in various occupations, but they are practically the only material we have, and, within limits, they may be used to good advantage The following plan is suggestive of what may be done. The method here described may be used in the tentative selection of an occupation by an individual as an aid to the study of occupations in class.

In Table XXXVII (p. 348), there is a composite scale at the top The base of this is the scores on the Army Alpha test from 0 to 220, these are given in the numbers below the lower line The numbers above this line represent the approximate mental ages on these scores as given by De Voss [1] Other approximations have been made, and, while there is no exact agreement, the ones given are fairly satisfactory Above this scale is another one indicating, very roughly, the approximate Intelligence Quotients on the same Army Alpha scores Since the men tested in the army were all adults above sixteen years of age, and since it is generally accepted that intelligence, as defined, does not increase after that time, we have taken sixteen as the chronological age for all and divided the mental age at each stage by the sixteen and in this way have obtained the Intelligence Quotients as indicated

[1] De Voss, James C, A Manual of Instructions for Use with the Army Alpha Intelligence Tests, Emporia, Kan. Bureau of Educational Measurements and Standards, Kansas State Normal School, 1922, p 24

on the scale This, of course, is very rough, but is probably accurate enough for our purpose

Below the scale is a table giving the Army Alpha scores for selected occupations. Column 1 gives 41 occupations, columns 2 and 3 are estimates of Army Alpha scores made from the chart in Army Mental tests[1] and corrected by reference to the Yerkes report listed in the bibliography These columns show for the 41 occupations the medians and middle 50 percentiles of all men tested by the Alpha and the Beta tests in the army The three occupations, (1) teachers in the elementary school, (2) lawyers, and (3) teachers in high school and college are estimated: no data are given for these in the Army tests Columns 4 to 5 give the median and middle 50 percentile Alpha scores of men listed as journeymen in various occupations These materials are taken from Table 377 (pp. 824–827) in the Yerkes report.[2] There is no exact estimate of the relative intelligence of apprentices, journeymen, and experts in different occupations The nearest approach to this is in the Yerkes report Here the differences between those who called themselves "journeymen" or "experts" and those who called themselves "apprentices" are noted for a considerable number of occupations. Even in the table (pp 348–349) it will be seen that these differences are sufficiently large to be significant in only a few occupations. In general, the significance is most marked in Groups I and II, with some of those in Group III also showing significance.

The scores for journeymen may be significant for certain occupations in Groups I, II and III. If, as seems to be indicated, journeymen and experts in these occupations are of higher intelligence, it might be advisable for a young man of high intelligence to enter one of these so-called "lower grade" occupations with the expectation that his advancement will be rapid. This seems to be borne out by a number of case studies of boys who actually did this and who were speedily advanced to higher positions in the vocation. This may be especially true of managerial positions in these occupations

[1] ARMY MENTAL TESTS, Washington Government Printing Office, 1918, p 23

[2] YERKES, ROBERT M., Psychological Examining in the United States Army, *Memoirs of the National Academy of Sciences*, Vol XV, Washington, Government Printing Office, 1921, pp. 824–835.

TABLE XXXVII —A TABLE FOR THE TENTATIVE SELECTION OF AN OCCUPATION

High School (IQ 90) — College (IQ 106)

Intelligence Quotients: 50, 60, 70, 80, 90, 106, 110, 120, 130, 140

Mental Ages: 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23

Army Alpha Scores: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200, 210

	Alpha and Beta scores, totals		Alpha scores, journeymen		General education required			Special training required, years				
1	2	3	4	5	6			7				
Occupations	Median	Middle 50 per cent	Median	Middle 50 per cent	Elementary	High-school	College	1	2	3	4	5
I 1 Laborers (unskilled)	36	20 to 62	49	33 to 70	✓							
II Semiskilled labor												
2. Tailors	39	21 to 62	48	30 to 72	✓				?			
3 Teamsters	42	22 to 68	49	30 to 71	✓							
4 Farmers	42	23 to 69	50	31 to 74	✓							
5 Barbers	43	24 to 71	56	34 to 78	✓				✓			
III. Skilled Labor.												
6 Bricklayers	48	23 to 79	60	37 to 93	✓					✓		
7 Cooks	50	26 to 75	66	43 to 84	✓							
8 Bakers	53	37 to 82	59	39 to 97	✓							
9 Painters	55	32 to 79	61	37 to 82	✓					✓		
10 General carpenters	56	34 to 83	60	42 to 84	✓							

11 Lathe hands	57	32 to 85	68	48 to 94	✓							
12. Butchers	57	34 to 83	60	41 to 84	✓							
13 General machinist	58	34 to 87	65	41 to 91		✓				✓		
14 Railroad conductors	61	40 to 84	70	47 to 94		✓			?			
15 Plumbers	61	37 to 88	68	47 to 87		✓				✓		
16 Auto chauffeurs	63	38 to 91	67	44 to 95		✓						
17. General mechanics	64	36 to 91	72	49 to 97		✓				?		
18 General auto repairmen	64	40 to 89	66	45 to 90	✓							
19 Tool-room experts	65	43 to 88	64	39 to 89	✓							
20 Policemen	67	44 to 90	69	48 to 97		✓						
21 Auto assemblers	67	44 to 94	73	57 to 100	✓							
IV. Business and Clerical												
22 Telephone operators	71	55 to 98	69	54 to 99		✓						
23 Receivers and shippers	76	52 to 106	75	50 to 102		✓						
24 Photographers	79	50 to 104	82	55 to 103		✓						
25 Band musicians	80	53 to 108	84	62 to 111		✓				?		
26 General electricians	82	55 to 110	81	58 to 107		✓						
27 Telegraphers	83	58 to 109	83	60 to 110		✓						
28. Filing clerks	95	72 to 114	95	76 to 124		✓						
29. General clerks	95	74 to 113	97	76 to 123		✓				✓		
30. Nurses	99	77 to 125				✓						
31 Bookkeepers	101	76 to 127	102	78 to 127		✓						
32 Mechanical draftsmen	112	76 to 134	116	100 to 135		✓						
33 Stenographers and typists	116	91 to 142	116	94 to 140		✓						
34. Accountants	118	94 to 143	120	99 to 136		✓						
V. Professional												
35 Civil engineers	121	94 to 156					✓					
36 Teachers—elementary	126	?				✓			✓			
37. Lawyers	128	?					✓		·	✓		
38 Physicians	128	107 to 164					✓					✓
39 Ministers	153	125 to 181					✓		✓			
40 Teachers—high school and college	156	?					✓		✓	✓		
41 Engineer officers	160	131 to 184					✓					

Opposite each occupation are shown the approximate amount of schooling considered necessary (column 6) and the number of years of additional or special training required to enter the occupation or that is generally considered desirable (column 7).[1] At the top of the scale are indicated the approximate lower limits for success in high school and also in college. This follows Terman's[2] estimate.

No claim is made for complete accuracy in this scale or in the table. The inaccuracy in using the army figures as a basis for success in occupations is freely admitted This has been discussed in Chap. IX, page 153 The mental age equivalents as given by De Voss differ from those given by Doll, and others, but the differences are not enough to reduce whatever value the method here described may have.

Sixteen years is taken as the base age for the limit of increase in intelligence, following Terman, for the reason that it is the middle ground. Otis takes eighteen years and Dearborn fourteen and one-half years Dearborn is probably more nearly correct for the entire unselected group. The further logical absurdity of accepting sixteen years as the limit of growth but still computing mental ages above this limit is fully recognized. The only extenuations for this are (1) that many still use this method, and (2) that, for purposes of estimate in school, we need some measure of intelligence that will approximately indicate intelligence equal to that of the upper range of scores in the Alpha Test

The table may be used in various ways One or two will be indicated, others will readily suggest themselves.

METHOD I INTELLIGENCE SCORES AS A BASIS

A When the individual is eighteen years old or more

1 Find the mental age by any standard test (If Army Alpha is used, mental age is not necessary)

[1] In the present chaotic condition of the apprenticeship system, it is impossible to state with any definiteness the number of years of additional training required Accordingly, only a few checks are placed in this column Local conditions should be investigated and the amount of additional training for each occupation determined with reference to the conditions.

[2] TERMAN, L M., The Intelligence of School Children, Boston. Houghton Mifflin Company, 1919, pp 78, 79, 281, 282.

2 Mark the place on the scale that corresponds to this mental age
3. From the table, find the occupation whose median mental age or alpha score is nearest to that of the individual Indicate the median of this occupation by a cross X and the range of the middle 50 per cent by lines
4 From the table select all occupations whose medians fall within this range; place check marks on these occupations As a rough measure we may say that, as far as intelligence is concerned, the individual would be successful in any of the occupations checked in column 2
5. From the table, find the amounts of general education and of specific training required for these occupations and indicate by a check in columns 4 and 5 any occupations requiring an amount of general education or specific training equal to that now possessed by the individual or that he is likely to be able or is willing to secure All occupations requiring more than he will be able to secure will be eliminated. We should take for further consideration only those occupations checked for all the categories so far listed A further help will be to consider the lower limit of intelligence for high school and college in the scale above If he does not have a degree of intelligence equal to the lower limit required for college, the occupations beyond this limit would be eliminated.
6 The next step would be to determine what specific or specialized abilities, if any, are required for any of the occupations so far selected As far as reliable tests have been constructed to determine the range of specific abilities required, the individual should be tested to determine whether he has the abilities required for such occupations. The list of occupations should be restricted by the elimination of those for which he does not have the necessary abilities.
7 If there are sex qualifications or definite physical requirements for any of the occupations in this restricted list, it can be still further reduced by the elimination of occupations requiring qualifications not possessed by the individual
8 We now have a final list of occupations in any one of which the individual may be successful so far as intelligence, general education, and special training, specialized abilities, sex, and physical qualifications are concerned These occupations thus indicated should then be studied intensively from other points of view Among these the most important are
   a Attractiveness for the individual
   b Service rendered
   c Remuneration
   d Possibility of advancement
   e Permanency
   f Social status
   g Physical surroundings
   h. Hours of service and general conditions of employment

Thus by a process of progressive elimination the problem of the occupation chosen may be very much simplified

B When the individual is under eighteen years old

1. Find the intelligence quotient by any standard intelligence test. Place a check on the scale and extend it so that it crosses the lower line
2. Proceed as in *A*.

METHOD II GENERAL EDUCATION AS A BASIS

A Determine the amount of general education that can be secured and check the occupations thus designated

B Determine the occupation whose median intelligence is nearest the intelligence of the individual

C Check those occupations whose medians lie within the 50 per cent range of the occupation

D The occupations not checked in all of the columns 2, 3, 4, and 5 would be eliminated

E Proceed as in I

The use of the table may be made clear by one or two illustrations:

Data John Smith
Age, 15
Mental age, 17
Tenth grade
Can complete high school and take one year of special training

On the scale, place a check at mental age seventeen This indicates an Alpha score of approximately 122 In the table, find the occupation whose median score is closest to this This happens to be that of the civil engineer Check this occupation The middle 50 percentile for civil engineers is 94 to 156. Check all occupations whose medians fall within this range They range from filing clerk to teacher in high school or college. Check all these occupations. This boy might, as far as intelligence is concerned, succeed in any of these occupations. It probably would not be best for him to consider occupations much lower than that of filing clerk if he can secure the training necessary to enter higher occupations. Since he cannot go on to college or take more than one year of special training, the occupations listed in the professional group (Group V) are closed to him His choice is then restricted to the following. filing clerk, general clerk, nurse, bookkeeper, mechanical draughtsman, stenographer or typist, and accountant. He can reasonably

expect to secure the training necessary for any of these occupations. He would then proceed to study the various occupations, following, as far as practicable, the outline on page 152. If preferred, the method suggested in II could be followed We would first select the occupations requiring a high-school education. These would be those grouped under IV. From among these select the occupation whose median intelligence is nearest that of John; this would be that of accountant. Proceed as before and, of the occupations already checked, select those that fall within the middle 50 per cent scores of the accountant. This would include occupations Nos. 28 to 34. Proceed as before.

Data: Jean Hunter
Age, 18
Twelfth grade
Scholastic rank high
Can take two additional years of work.

Since no data regarding intelligence scores are given, we must proceed from some other basis. Disregarding the scale at the top and proceeding according to Method II, place a check opposite all occupations that require a high-school education These will include all of those included among the Business and Clerical occupations and, in addition, the Elementary Teacher group in Group V. Since Jean can afford to take two additional years of work, check for special consideration those occupations already checked that require one or two years of additional preparation. The list then would be narrowed down to photographer, band musician, general electrician, telegrapher, nurse, bookkeeper, accountant, and elementary school teacher. She might also consider telephone operator. The occupations thus indicated may then be studied with reference to special abilities required, any sex limitations, and general desirability The limitations due to sex would, at once probably narrow the selection by excluding band musician and general electrician although in exceptional cases these might be included.

II. Placement

1 *Over-emphasis upon Placement.*—When the guidance movement started, it was thought of as concerned mostly with the

placement of workers. The slogan was, "Prevent the square peg from getting into the round hole" "Help the square pegs to get into the square holes" That is, the chief aim of vocational guidance was to steer people into jobs where they could do their best work. For a time there seemed to be real danger that all the time and money would be spent upon the placement of students, finding jobs for them, rather than upon the more fundamental parts of guidance. This was a need that had a direct and immediate appeal to business men, and money could more readily be obtained for this than for the other part of the guidance program where the results were not so immediate. It was, however, emphasizing what should be considered as the final results rather than the more important preparation. This danger has largely passed and we no longer need to fear overemphasis upon this phase of the work. Some, as Brewer and Proctor, do not regard placement (job-getting) as an educational function and think that if the work of guidance is well done the job-getting will take care of itself; parents and children will be able to secure jobs satisfactorily

2. *Placement as Essential to Guidance.*—This view has much to support it, but is fundamentally unsound, especially when we remember that education is lifelong and concerned as much with how a person uses his abilities as how he acquires them, with adjustments to activities, jobs, etc., as well as with the development of the skills necessary for success. Moreover, vocational guidance cannot be efficiently administered without the information to be gained by placement and without the contacts with employers that can be secured only in this way. Placement involves both preparation of the student for securing a position and assistance in getting the job. It no more takes away the initiative of the individual in getting jobs than guidance in the selection of a college takes away the initiative of student and parents in getting into a college. Both are sometimes administered so that initiative is taken away; but it is not necessarily so, and when done in this way it violates the underlying principle of guidance so often stated—that guidance should help the student to solve his own problems, should aim to make him independent of assistance.

3 *Placement as a Public Responsibility.*—Experience has shown that placement is best administered when the agency doing

this work is a public agency Private placement bureaus often do a real service, but are and must be run for money and too often exploit the candidate for the financial returns to the agency They are interested in the money that comes from placements Public agencies are free from that temptation. They are in a position to render the best service both to the individual and to the employer. Ordinarily, it is more important to get the right job than to get a job The school is in a position of special importance and it has a special responsibility for placement because it is interested in the welfare and the development of the individual No other agency feels this responsibility as keenly as does the school. In addition to this, the school has had the individual for many years and knows more about him than does any other agency. It is thus in a position to give the employer intimate and exact information about the student and to determine what type of occupation is best suited to the student himself. We must, then, accept placement as one of the functions of the school. It may not be entirely the obligation of the school, but the school should certainly share in the work. A central placement service for an entire city is, beyond doubt, very essential, but there must be a branch office or a placement representative in each school. Placement work far removed from contact with individual students and with teachers who know the students can never be effective, it is bound to be more or less mechanical; conceived of as such a mechanical process, it is not a function that can be called "educational."

4. *Contacts with Employers.*—The first job of schools in preparing for placement is securing contacts with employers so that they will keep the school informed about their needs, about vacancies as soon as they occur. This means not only establishing avenues of information but securing the sympathetic cooperation of employers. Confidence in the judgment of the placement officer is, hence, one of the essentials. For this reason, placement officers in school make efforts to establish personal contacts with employers, and schools should provide for continuity of service of placement officers.

5. *Assistance in Securing a Job.*—The next step in the process is to assist the student in his search for a job and in his application for the job. Nearly all the textbooks used in the vocational civics classes, or classes on occupations, have excellent material

on this point. Miss Edith J Veitch[1] has brought together some valuable suggestions under the headings:

1 Personal Appearance
2. Favorable Impressions
3 Unfavorable Impressions
4 How to Fill Out an Application Blank

Gowin, Wheatley and Brewer, "Occupations,"[2] Chap V, is especially good, and Bate and Wilson, "Studies in Vocational Information,"[3] Chap. XI, is excellent. The folders used in the Pittsburgh schools are interesting and helpful The helps compiled by the Committee on Guidance of the National Association of Secondary School Principals[4] show the general character of the suggestions and are given below

BEFORE YOU LEAVE

home to interview a prospective employer, determine to succeed in getting the position Remember to
Make yourself clean and tidy
Comb your hair
Shave
Clean your teeth
Manicure your nails
Shine your shoes
Wear a clean shirt and collar
Press and brush your clothes
Replace all missing buttons
Remove gaudy pins and advertising buttons
Wear a hat or cap that goes well with your suit
Take any letters of recommendation you may have
Carry a clean handkerchief

WHEN YOU ARRIVE

at the place where you intend to apply for a position, it will be to your advantage if you remember to
Glance at your personal appearance before entering
Leave your cigarette outside
Kill any tobacco odor on your breath
Remove any candy or gum from your mouth
Remove your hat or cap on entering
Ask only for the person you are to interview
Remain outside "Private Office" until told to enter
Refrain from interrupting a conversation
Introduce yourself, state your reasons for calling, and present card of introduction

[1] VEITCH, EDITH J , Applying for a Position, *Vocational Guidance Magazine*, 7 79–82, November, 1928

[2] GOWIN, E B , WHEATLEY, W A , and BREWER, J. M , Occupations, Boston. Ginn and Company, 1916

[3] BATE, W G , and WILSON, ELIZA A , Studies in Vocational Information, New York· Longmans, Green & Co., 1926

[4] NATIONAL ASSOCIATION OF SECONDARY-SCHOOL PRINCIPALS, Committee on Guidance, Guidance in Secondary Schools, *Bulletin* No 19, Cicero, Ill., January, 1928, p 31.

BEFORE YOU LEAVE

Carry money for carfare and lunch
Leave early enough to keep your appointment on time

The testimony of several young men has shown that many prospective positions are forfeited through failure to remember these important details.

WHEN YOU ARRIVE

Remain standing until invited to be seated
Sit comfortably in your chair
Do not slouch
Be willing to take a test to show your ability
Be courteous all the time
Show willingness to return for a second interview
Let the employer do most of the talking

Information from employers shows that the young men who are hired and succeed are the ones who remember these pointers all the time

The suggestions given by the Guidance Committee and by Miss Veitch are used in vocational civics classes, in homeroom conferences, and in personal conferences with individual students Some schools dramatize the situation of seeking a job in such a way that the various points brought out in the suggestions are clearly shown and the necessity for such things as dress and good manners emphasized.

The bulletin board is very useful in emphasizing points that should be kept in mind and in calling attention to important matters of a more general nature Striking passages from a story are copied, or a stanza from a poem that carries a definite message, or the advice of some captain of industry such as Schwab's "Ten Commandments of Success"

THE TEN COMMANDMENTS OF SUCCESS

CHARLES M SCHWAB

1 *Work hard.* Hard work is the best investment a man can make

2 *Study hard* Knowledge enables a man to work more intelligently and effectively

3 *Have initiative* Ruts often deepen into graves

4 *Love your work.* Then you will find pleasure in mastering it

5 *Be exact* Slipshod methods bring slipshod results

6 *Have the spirit of conquest* Thus you can successfully battle and overcome difficulties

7 *Cultivate personality.* Personality is to the man what perfume is to the flower

8. *Help and share with others.* The real test of business greatness lies in giving opportunities to others

9. *Be democratic* Unless you feel right toward your fellow men, you can never be a successful leader of men

10 *In all things do your best* The man who has done his best has done everything. The man who has done less than his best has done nothing.

The material placed on the bulletin boards is changed frequently so that students will be constantly expecting some new message.

6. *Placement Offices*—Nearly every city of any size has some form of placement work. Sometimes this is unorganized, being conducted mostly in separate schools and sometimes highly organized in a central placement service. It is, however, recognized as an obligation that rests upon the school and that should not be left to commercial agencies.

III. Follow-up and Employment Supervision

1. *Importance of Follow-up.*—Follow-up and employment supervision is in many respects more important than mere placement. There are many problems that do not arise until the worker is actually on the job, and some of these are extremely difficult for the individual to solve without assistance. Many firms have personnel departments that definitely assist in the adjustments most necessary for the new worker. Some of these departments are very efficient and take a real interest in the worker. Many are run almost entirely from the standpoint of getting the most out of the worker, without regard to his own individual interests or needs. Here, again, is shown the advantage the school has in the follow-up work because it is concerned chiefly with the worker and with his needs and interests and not merely with getting the most work done. Many firms do nothing to help the young worker; he succeeds or fails by his own unaided efforts. When he fails, he is discharged and must get another job.

The placement and follow-up agency of the school attempts not only to find a suitable job for the boy, but to help him in getting adjusted to it and to assist him in securing advancement in it. It also tries to help the boy to get the most training possible out of temporary or juvenile occupations and to provide

for continuity of growth from job to job so that the progress from one job to another is continually toward better occupations.

2. *Difficulty of Follow-up*.—This is the part of the guidance program that is most difficult to finance and to administer. It takes an enormous amount of time and considerable money to follow up those who have left school and gone into occupations. It is so easy to lose sight of the individual; often he does not want to be followed up and frequently employers resent such attempts as unwarranted interference with their business. In spite of these handicaps, the work of following up students after they have left school is steadily progressing.

3. *The Boston Plan*.—Probably Boston has the most efficient system of follow-up of any large city. All young persons who are placed by the vocational Guidance Department are followed up by means of visits to employers and through the evening office hour to which the registrants are invited for interview. In addition to this, special follow-up studies are made.

> . . . each year from six to nine months after graduation the department endeavors to get in touch with each graduate registered by sending out letters and questionnaires, by telephone calls, and by home visits. From the data accumulated a report is made up and sent to each school principal, giving him detailed information on each graduate, including the name of the school or college which the pupil is attending, the names of employers who have employed him, the nature of the occupations engaged in, and the wages or salaries received. Summaries are made up showing also the proportion of graduates of each school who are attending colleges and other schools and the proportion who are at work, taking evening-school courses, etc.
>
> Records of registrants are filed alphabetically by the school last attended and in the case of high-school students are subdivided by the year of graduation or withdrawal. The kind of work desired is indicated on the registration card by fastening clips to the cord in one or more of ten spaces, the clips being of different colors to indicate whether the registrant is at school, is employed, desires change of work, etc. An alphabetical index of active and closed cases is kept, showing the date of registration and the school last attended. Pertinent information about any individual received in the course of follow-up work is entered on the personal record card of the registrant. Cards recording the results of investigation of employing firms are classified according to the occupational classification used by the United States Census. Employers' "orders" are filed alphabetically by months.

There is also a file, arranged alphabetically by firms, of "work records," which provide for the name of each young person known to be employed by the firm, whether placement has been made by the vocational guidance department or by some other agency, the date of placement, the name of the placing agency, the wage, the date of leaving, and remarks. A case is closed only when a young person has been in one position at least two years, has been graduated from a higher institution, or has withdrawn from one, or has reached the age of twenty-one In January, 1924, the department had in its files 12,274 active and 11,198 closed cases Many cases have a follow-up history covering from three to five years and afford valuable information for study.[1]

Many other cities are recognizing the value of such work and the obligation to provide for it and are initiating systems of follow-up and supervision to take care of the young worker who leaves school and enters an occupation.

QUESTIONS

1. How does counseling differ from teaching?
2. When should a counselor give advice?
3. Who should make the decision regarding occupational choice?
4. How much help should the school give in securing a job for the student?
5. Are commercial placement agencies justifiable?
6. What function is performed by follow-up and employment supervision?

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CHAPTER XXI

LEADERSHIP GUIDANCE

Leadership is a universal human phenomenon It is seen not only in all human relationships but also among all animals that lead a gregarious life. It is inevitable and inescapable We cannot suppress it if we wished; we can only direct it and utilize it for human betterment

I. THE NEED FOR WISE SELECTION OF LEADERS

There is growing recognition of the need for definite attention to the problem of the selection and training of leaders.

> Although education is primarily a responsibility of the states and local communities, and rightly so, yet the nation as a whole is vitally concerned in its development everywhere to the highest standards and to complete universality. Self-government can succeed only through an instructed electorate Our objective is not simply to overcome illiteracy The nation has marched far beyond that The more complex the problems of the nation become, the greater is the need for more and more advanced instruction Moreover, as our numbers increase and as our life expands with science and invention, we must discover more and more leaders for every walk of life
>
> We cannot hope to succeed in directing this increasingly complex civilization unless we can draw all the talent of leadership from the whole people One civilization after another has been wrecked upon the attempt to secure sufficient leadership from a single group or class If we would prevent the growth of class distinctions and would constantly refresh our leadership with the ideals of our people, we must draw constantly from the general mass The full opportunity for every boy and girl to rise through the selective processes of education can alone secure to us this leadership.[1]

We know that progress as well as stability of society is dependent in large measure upon leaders. The direction taken by any nation or any social group is determined by the kind of leaders it

[1] HOOVER, HERBERT, Inaugural Address, Mar 4, 1929, *Current History*, 30 4, April, 1929.

has. No problem that faces this country today is more important than the selection and training of leaders; the world-wide depression that so paralyzes industry and unsettled methods of living was brought about by unwise, unintelligent leadership The world waits in dread anxiety for a real leader who will point the way out of the present chaos and direct us to an economic and social organization that will make war impossible, that will prevent the recurrence of a condition where many are hungry in the midst of an abundant food supply and thousands who are eager to work are unable to secure jobs, although much work needs to be done How, then, can we select and train leaders? What help has guidance to offer in this emergency?

II. Kinds of Leaders

What is a leader and what different kinds of leaders are there? We may say that a leader is one who influences others to do something In this sense, everyone is a leader, for we all influence others to some degree or in some way. We are, however, just now interested in what we might call outstanding leaders—those whose influence over others is outstanding, unusual. One of the most conspicuous weaknesses in our usual discussion of leaders is that we take far too narrow a point of view of the scope of leadership. We too often think of leadership in terms of the lawyer, the statesman, the general, or the preacher. Our conception of the leader is largely that of the man who influences other men directly by the force of his personality or by more or less direct personal contact. We can see at once that this is very inadequate and incomplete While leaders, in common with all other human beings, defy accurate classification into types, for purposes of this discussion we may recognize at least three types.

First, there are the leaders who influence others more or less directly through personal contact of some kind These are the politicians, statesmen, generals, lawyers, and preachers. Second, there are the leaders who create and may never come into direct contact with other people. Such are inventors, explorers, research workers—those who push further the bounds of human knowledge Their influence is profound in all human history; they are absolutely essential to human progress Third, there are the great musicians, artists, and writers These leaders

also may seldom come into contact with others; at least, their influence is not due to their personal relationship. We should also distinguish between those leaders, chiefly of the first type, whose influence is immediate and those whose influence is delayed, sometimes until long after their death

It is necessary to keep these types of leader in mind, for the reason that the qualities and characteristics may not be the same for the different types The musician and the artist may need still other characteristics We shall make a great mistake if we confine our attention merely to the kind of leader illustrated by the politician or the general. Our schools, on the whole, are making this mistake, for we are emphasizing merely the leadership represented by captains of athletic teams and officers of student government associations and student clubs We need to have the broader point of view and to look for all kinds of leaders

> America is rich in a material way, far beyond the dreams of Croesus, but we are still impoverished in creative intelligence and in spiritual life. We have in our blood that which produces leaders, not imitators, and we are beginning to lead in creative architecture and in some branches of science . Original talent is rare—high original talent is rare indeed, it takes the most surprising forms; it leads in the most surprising directions, it either retraces old paths of wisdom or blazes entirely new and adventurous trails, as exemplified in the life of Aristotle in zoology, of Galileo in astronomy, of Shakespeare in literature, of Darwin in biology, of Maxwell in physics, of Langley and Wright in aviation, and of other pioneers in the fields of human endeavor [1]

III Essentials in Leadership Guidance

If we are to establish anything like an adequate set-up for the selection and training of leaders, we must (1) keep clearly in mind all these different kinds of leaders and provide for all of them; (2) devise methods by which we can discover early those who will probably develop into outstanding leaders; (3) develop methods by which these prospective leaders may be guided and trained so that leadership may be both intelligent and progressive, and (4) develop the ability in our young people to choose wisely those whom they shall follow.

[1] Osborn, Henry Fairfield, Creative Education, New York Charles Scribner's Sons, 1927, p. 7. (*Used by special permission of the publisher.*)

IV. Characteristics of Leaders

1. *The Problem* —The first question that is presented to us is "How can we discover those young people who will become leaders in later life and discover them early enough to make it possible to provide adequate training?" The solution of this problem is dependent upon our ability to analyze leadership and determine what the characteristics of leaders are. Can we do this? There have been many attempts to list leadership characteristics, some of these are helpful and some are not. Most of them are purely or very largely subjective and seem to have in mind only such leaders as generals, statesmen, and clergymen Writers do not agree on the essential characteristics of leaders.

2. *Characteristics Noted by Writers on Leadership.*—In a recent study, Gerald L Zimmerman analyzed fifty magazine articles and books on leadership and listed the characteristics mentioned There were in all over 200 different qualities and characteristics. Most of these were mentioned by only one writer. Omitting all those characteristics that had been mentioned only once, the list was reduced to sixty-six Selecting from these the ones mentioned by at least five authors, we have the following list of traits with the per cent of authors mentioning each· (1) courage, 30 per cent, (2) intelligence, 28 per cent, (3) vision, 26 per cent; (4) initiative, 16 per cent, (5) insight, 14 per cent, (6) personality, 14 per cent, (7) openmindedness, 14 per cent; (8) knowledge, 12 per cent; (9) self-confidence, 10 per cent; (10) sympathy, 10 per cent; (11) energy, 10 per cent; (12) sincerity, 10 per cent.

George V. N. Dearborn[1] lists eight characteristics as follows: (1) intelligence, (2) initiative, (3) courage, (4) self-trust, (5) insight, (6) kindliness, (7) good humor, and (8) knowledge of human nature. Of this list, the first five are common to the list found by Zimmerman.

Another list, prepared by Harry S Ganders,[2] gives the following fourteen qualities, very few of which are found in the two lists given above.

[1] Dearborn, George Van Ness, Every Man a Leader, *Scientific American Supplement*, 84 118–119, Aug. 25, 1917

[2] Ganders, Harry S , Prestige, Loyalty, Popularity, and Other Accompaniments of Leadership, *Educational Review*, 74 205–208, November, 1927

1. Self-control	8 Frankness
2. Fairness	9 Positiveness
3 Impartiality	10 Decisiveness
4 Energy	11 Dignity
5 Enthusiasm	12 Likableness
6 Tact	13 Pleasantness
7 Honest sincerity	14 Friendliness

As has been said, these lists are largely subjective and quite unreliable. A more reliable method of approach would be to study the lives of many leaders of different types and attempt to find characteristics or combinations of characteristics that are common to all or are common to types of leaders. This could be done by an analysis of reliable biographies of leaders Fortunately, we do have one outstanding study that was made from this point of view.

3. *Youthful Traits of Leaders.*—As early as 1913, Dr. Lewis M. Terman of Stanford University began a study of exceptional children—those who were of unusually high intelligence as judged by various mental tests. This study was considerably enlarged and extended by reason of two grants from the Commonwealth Fund. Under this subvention, Dr Terman began a more systematic study of a thousand children all over 130 I Q. Many measurements were made and observations recorded for these children Ten years later, in 1931, a follow-up study was made, the results of which have not yet been published This study should give some data that may be helpful in determining characteristics that persist at least over ten years If these children can be kept under observation until they reach the age of thirty or forty, still further evidence may be secured.

Another part of this study more nearly concerns us here [1] This was an investigation into the early lives of 300 outstanding leaders or geniuses in a variety of fields. One hundred of these geniuses were selected for special study, and their recorded biographies were carefully analyzed to find what characteristics or traits they showed when they were young. In all, sixty-seven traits were listed. Several judges read the biographies and rated each genius on a seven-point scale for each of the sixty-

[1] Cox, Catharine M, The Early Mental Traits of Three Hundred Geniuses, Genetic Studies of Genius, Vol II, Stanford University, Calif Stanford University Press, 1926.

seven traits. If an individual possessed a given trait to an average degree—about the same as most people—he was rated 0; if he had it to an extraordinary, *very* unusual degree, he was rated +3, if he lacked it entirely, he was rated −3 Ratings of +1 and +2 and −1 and −2 were given as intermediate steps These leaders or geniuses were arranged in eleven groups or types as follows:

1. Artists

Canova
Hogarth
Michelangelo
Murillo
Raphael
Reynolds

2 Poets

Burns
Byron
Chatterton
Coleridge
Hugo
Lamartine
Milton
Schiller
Tennyson
Wordsworth

3 Musicians

Hayden
Mozart
Rossini
Wagner
Weber

4 Historians

Carlyle
Gibbon
Guizot
Macaulay
Niebuhr
Prescott

5 Soldiers (Statesmen)

Cromwell
Garibaldi
Jackson
Napoleon
Washington

6 Soldiers (Fighters)

Grant
Marmont
Murat
Ney
Nelson

7 Scientists

Agassiz
Arago
Cuvier
Darwin
Davy
Gay-Lussec
Laplace
Liebig
Newton

8 Philosophers

Bacon	Kant
Comte	Leibnitz
Cousin	Locke
Descartes	Mill
Fichte	Schelling
Hegel	Schleiermacher

9 Revolutionary Statesmen

Cavour	Mirabeau
Danton	Robespierre
Mazzini	

10 Religious Leaders

Chalmers	Luther
Calvin	Wesley
Channing	

11 Statesmen

Brougham	Jefferson
Burke	Lincoln
Canning	Peel
Cobden	Pitt
Fox, C. J	Webster

The following table gives these ratings for each group of leaders. To the original list of traits has been added the intelligence quotient as estimated by Dr Cox In order to make it possible to compare each group, the ratings are arranged in rank order according to average ratings for the groups as a whole In the next to the last column will be found the trait number of each trait as given by Dr. Cox in her study.

Before considering the table in detail, it may be well to quote two groups of significant conclusions drawn by Dr Cox:[1]

1. Youths who achieve eminence have, in general, (*a*) a heredity above the average and (*b*) superior advantages in early environment

2 Youths who achieve eminence are distinguished in childhood by behavior which indicates an unusually high I Q—150 to 200 The extraordinary genius who achieves the highest eminence is also the gifted individual whom intelligence tests may discover in childhood

3 Youths who achieve eminence are characterized not only by high intellectual traits but also by persistence of motive and effort, confidence in their abilities, and great strength and force of character

[1] *Ibid.*, pp 179, 180, 215–218

TABLE XXXVIII —YOUTHFUL TRAIT RATINGS OF LEADERS[1]

Rank	Trait	Artists	Musicians	Poets, novelists, dramatists	Essayists, critics, historians	Scientists	Philosophers	Religious leaders	Soldiers (fighters)	Soldier-statesmen	Revolutionary statesmen	Statesmen	Trait number (Cox)	Average
1	Desire to excel	2 9	2 9	2 5	2 7	2 6	2 6	2 8	2 7	2 4	2 2	2 9	9	2 65
2	Intelligence Quotient	1 7	2 2	3 0	2 7	3 0	3 0	2 5	2 5	2 5	2 5	2 5		2 55
3	Tendency to quit tasks from changeability	2 1	2 9	1 3	2 5	2 8	2 9	2 7	2 1	2 4	2 9	2 6	34	2 47
4	Persistence in tasks	2 1	2 9	0 8	2 1	2 6	2 5	2 9	2 7	2 4	2 0	2 3	33	2 38
5	Strength of will	2 3	2 7	0 6	2 0	2 8	2 6	2 7	2 8	2 6	2 2	2 6	42	2 35
6	Mental work on special interests, pleasures	2 0	2 9	2 6	2 8	2 8	2 8	2 6	1 1	1 1	2 7	2 3	29	2 34
7	Belief in own powers	2 1	2 7	1 5	2 0	2 3	1 7	1 8	2 6	2 0	2 7	2 9	12	2 21
8	Originality of ideas	2 3	2 8	2 5	2 0	2 7	2 8	1 6	0 8	0 7	2 4	1 5	38	2 09
9	Forcefulness	1 6	1 3	1 4	1 8	2 3	1 4	2 8	2 5	2 5	2 8	2 4	60	2 07
10	*Profoundness* of insight	1.3	1 3	2 2	2 5	2 8	2 9	2 7	1 1	1 5	2 0	2 4	36	2 06
11	Work toward remote ends	2 3	2 6	0 4	2 1	2 7	2 3	2 4	2 4	2 0	1 9	2 5	32	2 04
12	Esteem of his talents	1 9	2 0	2 1	1 8	2 1	1 4	2 3	2 0	1 4	2 4	2 5	13*b*	1 99
13	Quickness of insight	1 3	1 9	1 7	1 8	2 2	2 5	1 4	2 0	1 7	2 4	2 4	35	1 94
14	Intensity of influence	1 3	1 7	1 8	1 9	1 8	2 0	2 5	1 2	1 7	2 5	2 7	26	1 92
15	Strength of memory	1 1	1 7	2 1	2 7	2 3	2 3	2 2	0 2	0 9	2 3	2 4	48	1 84
16	Keenness of observation	1 8	1 4	2 3	1 8	2 7	1 4	0 9	1 6	1 8	1 9	1 8	64	1 77
17	*Trustworthiness*	0 8	0 6	1 0	1 9	1 7	1 7	2 9	1 5	2 3	2 4	2 5	20	1 76
18	Desire to impose will	0 3	1.3	1 9	1 9	1 1	1 3	2 5	2 2	1 9	2 9	1 8	10	1 74
19	Esteem of himself	1 1	1 0	1 1	1 0	1 7	1 6	1 0	2 6	1 6	2 1	2 3	13*a*	1 72
20	Wideness of influence	1 1	1 4	1 6	1 1	1 4	1 2	2 1	2 2	1 9	2 6	2 2	25	1 71
21	Conscientiousness	0 8	1 3	1 0	2 4	1 3	1 8	3 0	0 3	1 0	2 5	2 4	21	1 62
22	Absence of readiness to accept others' opinions	0 3	1 0	1 7	2 1	2 3	2 3	1 3	1 5	1 2	2 6	1 4	23	1 60
23	Mental work on studies	0 5	0 5	1 1	2 3	2 3	2 8	2 3	0 7	1 1	0 2	2 7	28	1 50
24	Sense of justice	0 3	0 6	1 0	1 8	0 7	1 4	1 9	1 2	1 8	1 9	2 2	51	1 34
25	*Loyalty*	0 3	0 9	1 3	1 2	0 7	0 8	2 5	1 5	2 3	2 1	1 3	55	1 34
26	Bodily activity	1 2	0 9	1 1	−0 4	1 0	0 5	1 4	2 5	2 2	1 9	1 8	30*a*	1 30
27	*Impulsive kindness*	0 7	1 3	1 5	1 2	0 8	0 8	1 7	1 5	1 2	1 7	1 6	17	1 27
28	Esthetic feeling	2 8	3 0	2 8	1 2	0.2	0 8	0 9	0 1	0 5	0 4	1.3	7	1 27
29	Sense of corporate responsibility	0 3	−1 1	−0 3	1 3	0 6	1 2	2 0	2 0	2 0	2 4	2 2	46	1 25
30	Excitability	−0 1	2 3	2 7	0 0	−0 2	0 8	1 6	1 1	1 0	2 7	0 5	43	1 21
31	Fondness for circle of intimate friends	0 4	1 0	2 2	1 4	1 5	1 8	0 8	0 5	0 3	1 1	1 8	15*b*	1 20
32	*Pure mindedness*	0 9	0 7	1 1	1 6	1 5	1 0	2 2	0 6	0 8	1 1	1 7	39	1 20
33	Action based on reason	0 6	−0 8	−0 9	1 4	3 0	2 7	1 5	0 9	0 8	1 2	2 6	45	1 18
34	Common sense	0 5	0 1	−0 3	0 8	2 0	1 8	1 5	1 2	1 7	0 5	2 6	37	1 13
35	Neatness, accuracy	2 1	1 5	−1 0	1 4	2 7	1 0	0 1	1 0	1 1	−0 1	1 2	58	1 09
36	Cheerfulness	0 6	1 8	0 7	0 4	1 3	0 5	1 3	1 1	1 0	1 3	1 9	1	1 09
37	Family affection	0 9	1 3	1 3	1 8	0 4	0 9	1 6	0 4	0 9	0 4	1 5	52	1 03
38	*Physical bravery*	0	0	1 1	0 3	0 8	0 3	0 8	2 0	2 6	1 8	0 7	56	1 03
39	Desire to be liked	0 8	1 3	1 5	0 6	1 0	0 6	1 2	1 0	0 5	1 2	1 6	24	1 03
40	Kind on principle	0 8	0 8	0 8	0 7	1 0	1 1	2 2	0 8	0 4	0 9	1 7	18	1 02
41	Balance	1 1	0 6	−0 6	0 3	2 1	1 3	1 2	1 2	1 0	−0 1	1 9	50	0 97

TABLE XXXVIII.—YOUTHFUL TRAIT RATINGS OF LEADERS[1]—(*Continued*)

Rank	Trait	Artists	Musicians	Poets, novelists, dramatists	Essayists, critics, historians	Scientists	Philosophers	Religious leaders	Soldiers (fighters)	Soldier-statesmen	Revolutionary statesmen	Statesmen	Trait number (Cox)	Average
42	Imagination	0.8	1.8	2.8	1.3	0.3	0.5	0.8	0.4	0.4	1.3	0	6	0.94
43	*Corporate interest*	−0.3	−1.0	−0.4	0.3	0.2	1.0	1.8	1.9	2.5	2.4	1.9	19	0.93
44	Affection—same sex	0.8	0.8	2.0	1.6	0.4	1.2	1.9	0.0	0.1	0.9	1.2	53	0.90
45	Self-criticism	0.5	0.8	1.8	1.6	0.2	1.3	1.3	0.1	0.1	1.2	0.8	49	0.90
46	Punctilious behavior	0.4	1.0	0.9	0.8	1.0	0.5	0.9	1.1	0.6	0.5	1.6	57	0.85
47	*Interest in religion*	0.3	−0.1	1.7	1.6	−0.1	1.8	2.8	−0.5	0.3	0.6	0.8	22	0.83
48	Fond of companionship	0.7	1.3	0.0	−0.4	1.0	0.3	−0.2	1.6	0.7	1.0	1.4	16	0.81
49	*Tact*	0.8	0.3	0.7	0	1.2	0.5	1.1	0.9	0	0.7	2.5	27	0.79
50	Sensitive to criticism	0.0	1.3	1.5	1.8	−0.2	0.6	0.6	1.0	0.2	1.3	0.6	44	0.79
51	Constancy in friendship	0.4	0.3	1.7	1.6	0.3	0.9	1.3	0.4	−0.1	0.3	1.1	62	0.75
52	Introversion	0.1	0.3	2.1	1.5	0.3	2.0	0.5	2.5	−1.3	0.1	−0.1	47	0.73
53	Self-expression—action	0.8	0.9	−0.8	−1.5	0	−1.6	1.6	3.0	2.6	1.7	0.9	31	0.69
54	Sense of humor	0.6	1.8	0.7	0.7	0.1	0.3	1.0	0.5	−0.5	0.6	1.6	8	0.67
55	Physique	0.7	0.2	−0.5	−0.7	1.2	0.3	1.3	1.4	1.9	0.6	0.8	41	0.65
56	Bodily activity on pleasure	−0.2	−0.3	0.5	−1.5	0.8	−0.4	1.3	2.7	2.6	−0.6	1.4	30b	0.57
57	Affection—opposite sex	−0.1	0.7	2.1	1.5	0.3	0.0	0.1	0.3	0.3	0.6	0.5	54	0.57
58	Fondness for large social gatherings	0.2	1.1	0.5	−0.6	0.3	0.1	0.2	1.1	0.3	0.9	1.2	15a	0.48
59	Reserve	0.4	−0.2	−0.2	0.8	1.3	1.0	−0.4	0.4	0.9	−0.4	1.3	59	0.45
60	Absence of self-esteem	0.3	0.8	0.3	0.4	0.8	−0.2	0.9	0.2	−0.5	0.7	1.2	14	0.45
61	Skill in sports	−0.4	−1.6	0.2	−1.8	0.3	1.3	0.7	2.3	2.2	0	0.6	40	0.34
62	Constancy in affection	0.0	0.1	−0.2	1.3	0.4	0.0	0.6	0.4	0.4	−0.4	0.3	63	0.27
63	Absence of worry	−0.8	0.3	0.6	−0.5	0.6	−0.2	−0.1	1.4	0.6	0.5	1.0	5	0.22
64	Absence of oscillation—cheerfulness and depression	0.5	−0.8	−1.5	0.6	1.0	0.0	0.2	0.9	0.3	−0.2	0.8	2	0.16
65	Conventionality	−0.8	−0.5	−1.0	−0.2	0.2	0.3	−0.5	0.7	0.4	−1.7	1.3	61	−0.16
66	Absence of eagerness for admiration	0	−1.3	−0.5	−0.1	0.2	0.6	0.4	−1.7	−0.7	0	−0.6	11	−0.34
67	Absence of occasional extreme depression	−0.2	−0.2	−2.3	−0.4	0.6	−0.4	−0.4	0.1	−0.1	−1.0	0.3	3	−0.36
68	Absence of anger	0.3	−0.2	−1.3	−0.7	0.2	−0.3	−0.3	−0.6	−1.6	−1.6	0.5	4	−0.49

[1] Adapted from COX, CATHARINE M., Genetic Studies of Genius, Vol. II. Stanford University, Calif.: Stanford University Press, 1926.

[She further concludes:] The following traits and trait elements appearing in childhood and youth are diagnostic of future achievement: an unusual degree of tendency not to be changeable, tenacity of purpose; perseverance in the face of obstacles, combined with intellectual energy, mental work bestowed upon special interests; profoundness of apprehension, originality of ideas; and, especially desire to excel—ambition.

This may easily be seen from the table. The first twelve traits are for most groups quite significant. By glancing down the list, many other similarities will be seen. On the whole, the lower

down we go in the list the less striking the traits become—that is, the less difference there is between the geniuses and ordinary people. While there are many points of agreement, significant differences appear. For example, in the trait ranked 5, strength of will, all groups show marked development of this trait (above 2) except the group poets, novelists, and dramatists In the trait ranked 6, the two groups of soldiers above are not conspicuous. In traits 4 and 11, we again see the group poets, novelists, and dramatists as inconspicuous In trait 53, a great variation in strength of trait is seen Essayists, critics, historians, and philosophers are conspicuously lacking, while soldiers manifest it to a very striking degree. In trait 33, action based on reason, scientists, philosophers, and statesmen are very conspicuous In trait 49, the only group that is conspicuous is that of statesmen. Another helpful comparison would be to take statesmen and revolutionary statesmen and compare the traits of each; also compare soldiers (fighters) with soldier-statesmen.

One point of great importance is clearly seen—leadership is a resultant not merely of one or two traits possessed in a very conspicuous degree, but of some combination in varying degrees of several traits. This study is, of course, inadequate in many ways; it must be followed by many other investigations of a similar nature before we can accept the conclusions as entirely valid. It is, nevertheless, quite helpful as a starting point

V. Value for Guidance

1 *Need for Complete List of Traits*—How can these results be used in leadership guidance? In the first place, it should give us a better idea of what traits and characteristics to look for As an illustration, the traits listed by Boy Scout executives as desirable objects of endeavor are as follows: (1) trustworthiness, (2) loyalty, (3) helpfulness, (4) friendliness, (5) courtesy, (6) kindness, (7) obedience, (8) cheerfulness, (9) thrift, (10) bravery, (11) cleanliness, (12) reverence. These are called character traits, to be sure, but are looked upon also as leadership traits In the table, the nearest equivalents to these traits are italicized. A comparison of these with the traits of leaders will show that these are characteristics of only certain groups of leaders and particularly stress those of religious leaders. We should have in

mind a wider range of characteristics than those mentioned by the Boy Scouts if leadership selection and training are to be effective. We should remember the artist, the musician, the scientist, the inventor, the writer.

2. *Needs of Appropriate Situations for Leadership.*—In the second place, we must remember that leadership does not show itself in a social vacuum. It must have appropriate situations in which to function. We should, accordingly, provide abundant opportunities for leadership of all kinds, not only to show itself, but to exercise itself. It is England's boast that its leaders were produced on the playgrounds of the great public schools This may or may not be true, but it is not safe for England or any other nation to depend upon the athletic field as the sole or the chief agency for leadership training. Not only the athletic field but student government, the various student clubs, and the regular classroom activities must be utilized. Athletics must be reorganized so as to allow more complete opportunity for the manifestation of leadership ability and for its training. More important even than this, the classroom activities must become less teacher-controlled and more pupil-directed. We must provide opportunity for every form of leadership to show itself. We must also remember that it is not only in school activities that leadership qualities are manifested. Many times out-of-school life is even more important.

3. *The Recording of Leadership Traits.*—Probably the most important function of guidance in leadership, next to providing opportunity for leadership to show itself, is that of carefully recording the traits and characteristics shown by various individuals. Much of the work of Terman is concerned with making a record of the traits of the thousand children studied. A cumulative record of each child from the time he enters the first grade to the time he completes high school or college will be invaluable in discovering leadership qualities. Such a record should include out-of-school activities as well as those in school.

The plan worked out by Miss Parker in the Tacoma High Schools, described in Chap VIII, is very helpful in discovering leadership talent. Dr. Hughes has also provided some helpful methods in his Rating Scale for Individual Capacities, Aptitudes, and Interests, described in Chap. X.

VI. Guidance in the Development of Leaders

Leadership guidance is concerned not only with the selection of leaders but also to a large extent with guidance in training leaders. Not all leaders are useful. Some are dangerous because of ignorance, some because of sheer stupidity, and some because of bad character. Whatever the cause, they are dangerous A good or useful leader is one who influences others to do things that will result in improvement, in progress, or it may even be in resisting change, in preserving customs and institutions found to be of value. Leadership is a force that must be guided and trained in order to be useful.

Here we are confronted by a troublesome dilemma. Shall we by indoctrination and by selection predetermine the direction which leadership shall take or shall we allow for great freedom? Shall we seek to preserve and continue a certain form of government or social custom or shall we run the risk of disruption and overthrow of customs and forms that have existed for centuries? Russia just now presents a striking example of the policy of indoctrination in her educational system. If her present policy continues, we shall in all probability see in less than a generation the rise of leaders who are anti-religious and anti-capitalistic to say the least. England and the United States are on the whole representative of the policy of greater freedom, or perhaps it would be nearer the truth to say that we have no policy at all; leaders largely grow with little conscious attempt either at giving them freedom or at indoctrination No country and no educational system can escape some indoctrination of ideas and of ideals, it is inevitable But no nation in the face of present conditions can afford to indoctrinate to the point of fixing the exact form of government, of preserving without change social customs and institutions. The only safe form of indoctrination would seem to be that which emphasizes ideals of service; of continual readjustment of social forms to meet new conditions; of large tolerance of varying, even conflicting, ideas. This, with definite and careful inculcation of the facts necessary for wise leadership and emphasis upon high ideals of character, is, perhaps, all that we can do

It is quite obvious that this form of leadership guidance must be personal. It must often be very indirect and take the form of

definite provision for opportunities in which the individual may try himself out Personal conference between principal, counselor, or homeroom sponsor and the individual student is the most effective method of assistance

VII. Guidance in the Choice of Leaders

1 *The Need*—Leadership guidance is also concerned with the development of the ability to choose leaders wisely No matter how inefficient or corrupt our city, state, or national government may be, it is the kind of government that the citizens have chosen. We are responsible for the acts of our officers, for it is we that have chosen them This is a matter of prime concern—the choice of our leaders—and it is one that has received scant consideration in our schools. Here is a rich field for our counselors and especially for our homeroom sponsors. School life in the homeroom, in the classroom, in the field of athletics and student clubs as well as student government furnishes abundant opportunity for training in the ability to choose leaders.

2 *Practice in Choosing Leaders*—Some schools are beginning to utilize these opportunities by providing for study and discussion of the qualities necessary for the kinds of leaders chosen, by stressing the necessity for discrimination in the choice of officers, and by frequent practice in the election of leaders It is true that school situations are not the same as those outside the school, and habits and ideals developed in the school do not necessarily carry over into life outside, but we do believe that such training may be made to result in great improvement if properly organized and administered.

3 *Methods Used*—Schools are doing some very good work along the line of assisting students to select good leaders This is done in connection with student government and with various clubs—athletic and social Sometimes, this is taken up in the civics classes; more often, it is the subject of group discussions in homerooms and with special advisers or counselors Before the election of officers of any organization, before nominations are made, the group discusses the general question of the requirements of the office and what sort of characteristics a person should have to be a good officer There is the greatest freedom of discussion allowed and free interchange of opinion. This operates to focus attention upon the problem, it makes students

think about the question of wise selection of leaders. Wise selection does not always result, but when such a situation occurs, further discussion may be organized in which the failure and the causes of the failure are brought out. Sometimes hypothetical cases are brought up, and the reactions of the students are obtained In one such study,[1] the students listed the following traits in the order which they thought most dangerous in a judge:

1. Intemperance
2. Selfishness
3. Laziness
4. Immorality
5. Disobedience
6. Extravagance
7. Cowardice
8. Falsehood
9. Intolerance
10. Dishonesty

Apparently, those students thought intemperance the worst trait and dishonesty the least undesirable. This shows at once a need for assistance in forming judgments that are more intelligent.

In civics classes and in problems of democracy, the class often takes up for discussion the candidates nominated for the various public offices and discusses characteristics essential to a wise choice.

4. *A Plan for the Selection of Leaders* —W. D. Buchanan[2] developed a plan for the training of leaders and for training in the selection of leaders that is very significant. He felt that children could be developed more in true leadership by means of their organized plays and games than through classroom exercises that require the training and experience of a good teacher.

"Games on the playground are on the child's level of experience Therefore, he can more easily master the necessary rules"

He thinks that the situation on the playground is more nearly a life situation than that in the schoolroom.

> The children in Grades II to VI, inclusive, are organized in teams In preceding years, when the school included the seventh and eighth grades, the pupils in these grades also were organized. The teams are organized within the rooms. Teams from various rooms occasionally stage games

[1] Mitchell, Claude, Pupils' Standards of Judging Citizenship, *School Review*, 33 382–386, May, 1925

[2] Buchanan, W D, Development of Leadership and Democracy through Organized Plays and Games, *Elementary School Journal*, 28. 225–226, November, 1927.

The teachers discuss with the boys and girls the qualifications of a good captain They also urge the pupils to choose captains who have these qualifications The children then nominate and elect captains for the various teams Each captain serves for ten weeks and cannot be elected to succeed himself as captain of the same team It is the aim of the school to give as many pupils as possible an opportunity to profit by the training gained by acting as captain The teacher can always veto the election of any captain.

The captain's authority is exercised in the following ways· He chooses and places his players. There are always two teams of boys and two teams of girls in each room so that each pupil is chosen by one of the captains. The captain may "bench" a player for not playing according to the rules. The player may appeal to the teacher supervising the game or to the principal

At first, the captains were inclined to be too "bossy," and the players to "crab" about the captain. The following ruling was made to meet the situation, and it has effectively stopped the bossiness and the crabbing. No player is forced to play under any one captain A captain retains his title for ten weeks, although all the players may leave his team and form a new team and elect a new captain, thus leaving a captain who is too bossy without anyone to boss This has happened only twice in six years

The regulations governing captains and teams tend to make even the best players considerate of their team mates The regulations also tend to keep the disgruntled player from criticizing his captain Thus, a situation is developed whereby children learn to play together and to cooperate with one another The result is democracy and good citizenship as well as intelligent leadership

The plan described has been used by the writer in both the Dozier school and the Jackson School, and it has worked very successfully in both

We need more schools where the importance of the whole problem of leadership selection and training is recognized and where definite experimentation will be carried on in providing opportunities for leadership traits to show themselves, for making a record of those traits, and for practice in the choice of leaders.

QUESTIONS

1 Are leaders born or made?
2. What do we mean by wise leadership?
3 How can future leadership be predicted?
4 Are people divided into two classes—leaders and followers?

5 What are the characteristics of leaders?
6. Shall leaders be trained to maintain the present social order?

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Chapter XXII

LEISURE-TIME GUIDANCE

(CIVIC AND SOCIAL GUIDANCE)

I. The Place of Leisure in Society

1. *Meaning of Leisure.*—While the conception of leisure has varied in some respects from time to time, it has always carried with it the idea of free time, that is, spare time at one's disposal It is usually interpreted as time not spent on the activities of making a living—one's occupation—nor on the activities concerned with keeping alive or maintaining one's physical efficiency —eating, sleeping, and ordinary care of the body It is not synonymous with idleness nor with avocations or hobbies nor with recreations nor with all of these. These are merely ways of employing leisure time. It is often difficult to determine when the activities of sleeping, eating, and care of the body cease to be concerned with keeping alive and become leisure-time activities. It is also sometimes difficult to distinguish between one's vocational and one's avocational activities. However, the distinction can, in most cases, be made with sufficient definiteness to give a clear concept

2. *Leisure Time and Human Needs.*—The amount of leisure time one has is dependent upon the relationship between one's needs and the time it takes to supply these needs. Leisure time may be increased either by decreasing needs or by increasing the power to supply the needs. Higher animals as well as uncivilized human beings have always had some leisure time; this is because their needs were simple and ordinarily fairly easily satisfied. Although human needs have a way of increasing with increased power to satisfy them, as civilization has advanced, human ingenuity has devised ways of tremendously increasing the power to satisfy these needs This has been done by multiplying the power of each man to produce. In general, this has been effected in two ways: (1) by commandeering the man power of

many to meet the needs of the few. This is slavery whether found in Egypt or in the factories and sweat shops of modern America; (2) by devices for increasing the productive power of each man These consist of machines and improved techniques of work Each of these methods is still being used in modern society.

3 *Leisure Time and a Privileged Class.*—Athenian civilization was based upon a substratum of slavery. This produced a class of citizens largely or entirely free from the necessity of making a living, a leisure class that provided amply for its needs by commandeering the power of many men. The rich and powerful of all ages have done the same Money, power, has been used to exploit the many for the benefit of the few. It is probably inherent in the modern profit-making motive. In such an order, human beings are looked upon as machines, each one representing so many energy units capable of producing goods that will increase the ability of the owner, the capitalist, the employer to satisfy his needs.

Such privileged classes have been present in all countries at all times They were seen in Egypt, in Athens, in Rome, throughout Europe in feudal times, in England, in the south, and everywhere in our present-day society On the whole, this class has constituted the aristocracy and has represented the ideal toward which the underprivileged class has looked with longing eyes and for which it has striven with eager zeal.

4 *Leisure Time and the Working Classes.*—The inevitable background of this picture of the privileged class has been toiling, sweating, grunting human beings, working from daylight to dark, year in and year out

> 'Each day, all day' (these poor folks say),
> 'In the same old year-long, drear-long way,
> We weave in the mills and heave in the kilns,
> We sieve mine-meshes under the hills,
> And thieve much gold from the Devil's bank tills,
> To relieve, O God, what manner of ills?—
> The beasts, they hunger, and eat, and die,
> And so do we, and the world's a sty,
> Hush, fellow-swine why nuzzle and cry?'[1]

[1] LANIER, SIDNEY The Symphony. (*Quoted by permission of the publisher.*)

Leisure time for such slaves, whether owned by masters or employed by hard driving capitalists, is very different from that of the privileged class It consists, at best, of breathing spaces between hours or days of toil. It may be time snatched surreptitiously from the regular work times, when the foreman is not looking, or rare holidays wisely prescribed by the church or even enforced idleness due to inclement weather or to strikes and unemployment. In any case, it is more or less fortuitous and unplanned.

5. *Leisure Time in Modern Society* —It is a singular thing that in America today, while we have a privileged class that has wealth enough to buy all the luxuries of the world, far beyond the dreams of the richest man in ancient Athens, we have practically no leisure class, at least none that is at all comparable to the class of free-born wealthy citizens of Athens, to the powerful barons of feudal times, or to the leisured gentlemen of England in the time of Locke. Many of our wealthy men are the busiest men we have; they have little or no leisure time The reason for this is that in America we have made a god of work. We think in terms of work, of power, of money. This is an outgrowth of our beginnings and our surroundings The early settlers found life in the new country unexpectedly severe The soil was poor, the Indians hostile, and the climate bleak and cold It was only by the most rigorous effort of everyone that life itself could be sustained. The gentlemen who first came to Virginia found the transition from a life of comparative leisure in England to that of hard, persistent personal labor difficult indeed. This bitter struggle for bare existence inevitably developed in the early settlers the feeling that work was a virtue and idleness a sin Out of this grim struggle developed the maxims "He who will not work shall not eat" and "Satan finds some mischief still for idle hands to do." Busyness and thrift became cardinal virtues, very close to religion if not actually synonymous with it. These ideals are strongly embedded in the American mind and color much of our thinking In a rapidly expanding country where production and supply lag behind needs, emphasis is naturally placed upon increased production and efficiency of man power "He who makes two blades of grass grow where one did before" is hailed as a public benefactor. "To buy more land, to plant more corn, to feed more hogs, to get more money, to buy more

land," in endless repetition, becomes the absorbing occupation of everyone. He who has no money dreams and works to get money enough to begin the ceaseless round; he who has wealth works to get more money, more power Joy and satisfaction come with the effort; everything else is forgotten

This idea has so permeated society that the idle rich are considered a menace, the wandering hobo little better than a criminal, idleness is considered the same as laziness, and both are sins against society. Laws have actually been proposed in several states making idleness a misdemeanor

Into this atmosphere of struggle and strain, of eternal striving for wealth and power, of the hope of personal profit, of the exaltation of work and efficiency have recently come two disturbing elements First, the conviction that no matter how long and how effectively they work, many men never can by their own efforts accumulate enough wealth to secure a competence or often even a fair living. Under our present system, the distribution of wealth will always be uneven It has been calculated that if $100 were divided among 100 people according to the present distribution of money, 1 person would have $59, 1 person would have $9, 22 would average $1 22 each, and 76 would average less than $0 07 each A living income can be assured to everyone only through a social order that definitely plans for such a result. Under our present system, the dream of the average man for a living wage is a myth Second, production has been so speeded up by labor-saving machines and by improved techniques that enough goods can be produced to provide a relatively high standard of living for everyone by a working week of thirty hours or less. This means not only that men will not need to work long hours at a stretch in order to provide the necessities of life, but that there will not be enough work to keep them busy for more than five hours a day We are thus suddenly confronted with the impossibility of the fulfillment of our dreams of obtaining an adequate standard of living by our own efforts and at the same time with the certainty that we shall have thrust upon us five or six hours a day that cannot be spent in the activities of one's vocation. The old standard of values is totally inadequate to deal with such a situation. Leisure time is no longer merely a breathing space between hours of work, it equals or exceeds the time spent upon one's vocation. The prevailing idea that one

should spend the major part of his time in work on his vocation breaks down completely If anyone attempts to do this, he deprives others of the possibility of work. Work, then, no longer can always be considered a virtue; it may even become a crime. As a result of these changed economic and social conditions, we see rapidly developing a leisure class, not a privileged wealthy class, but a class composed of the entire group of unskilled, semi-skilled, and skilled workers, the vast majority of the entire population "We are indeed witnessing the movement of a whole society into a way of life that hitherto has been reserved for a special privileged class.[1] Whether the same shortening of the hours of labor will apply to professional workers remains to be seen This problem of leisure time or non-occupational time is possibly the greatest single problem education has to face today

II. The Functions of Leisure

1. *Leisure as Related to Increased Production* —The function of leisure is largely determined by the kind and amount of free time and by the ideals of the age. When leisure time is merely short breathing spaces between long periods of sustained labor, its function has usually been thought of as *re-creation*, building the worker up so that he can do his work efficiently after the breathing spell. When the ideal is efficiency of work, increased production, more power, more wealth, the function of leisure is considered the same—to increase the productive power of the worker The purpose behind the measures taken by many employers to secure better homes for their employees, better working conditions, rest-rooms, recreations, etc., is a better standard of production. It is good business. The Roman emperors provided holidays for the populace, great gladiatorial combats, thrilling spectacles, sports of all kinds merely to keep the common people satisfied with their lot. It was good business We are often admonished to choose those activities for our leisure time that will increase our efficiency on the job. Here, the function of leisure is considered to be that of increasing the efficiency of production.

2 *Leisure as Related to Increased Consumption.*—A variation of the same fundamental idea is commonly seen in the educational

[1] Overstreet, H. A · We Move in New Directions, New York W. W Norton & Company, Inc , 1933, p 230

literature of the day. We are faced with great potential, if not actual, overproduction or underconsumption. One method of starting us on the road to recovery is to increase consumption Consequently, some educators and economists think of leisure as a method of increasing consumption and thus keeping the wheels of industry moving, that is, increasing the amount of work. Both of these ideas of the function of leisure are founded upon the same notion—the sacredness of work, of keeping busy, of increasing wealth and power.

3 *Leisure as Related to Human Development.*—The functions of leisure described above fail to touch the fundamental purpose of all education, of all society—the development of the individual. This purpose is well expressed by James Truslow Adams

> It is not a dream of motor cars and high wages merely but a dream of a social order in which each man and each woman shall be able to attain to the fullest stature of which they are innately capable, and be recognized by others for what they are, regardless of the fortuitous circumstances of birth or position.[1]

To quote again from this stimulating discussion by Adams:

> If we are to regard man merely as a producer and consumer, then the more ruthlessly efficient big business is the better Many of the goods consumed doubtless make man healthier, happier, and better even on the basis of a high scale of human values. But if we think of him as a human being primarily, and only incidentally as a consumer, then we have to consider what values are best or most satisfying for him as a human being. We can attempt to regulate business for him not as a consumer but as a man, with many needs and desires with which he has nothing to do as a consumer Our point of view will shift from efficiency and statistics to human nature.[2]

4. *The Leisure of a Privileged Class.*—The leisure of the privileged class of wealthy Athenian citizens, of the great feudal barons, and of the class of gentlemen was of a very different sort from that of the slaves and laborers who made their leisure possible and had a different function. Being freed from the necessity for work and having ample goods, they could imagine no point in using leisure time for speeding up production or increasing consumption, practically all of their time was free time and

[1] ADAMS, JAMES TRUSLOW The Epic of America, Boston. Little, Brown & Company, 1931, p 404

[2] *Ibid*, p 408

could be used as they chose Their problem was a way of life, and the purpose of this way of life was the development of a certain type of individual. This is, perhaps, most clearly seen in Athens at the time of Pericles. The dominating purpose of the wealthy class of Athenian citizens was the development of the well-rounded personality. For this purpose, their schools, their sports, their theaters and their adult activities were directed. With them sports were not primarily for amusement or recreation; they were a very important part of that training whose purpose was to develop the man of action and of wisdom, the beautiful and the good. As music, which included reading, literature, and history as well as music, was for the development of a beautiful soul, so gymnastics was for the development of a beautiful body Each contributed to the perfected man. It is small wonder that the conception of beauty reached its highest development in the culture of that time. Their lives were devoted to the appreciation of beauty in all its forms, to the creation of beauty, to the achievement of beauty.

It was also a duty of the citizen to serve the state. In the constitution of Athens, all the highest offices were reserved for the wealthiest class of citizens For this reason, it was necessary for them to give a large share of their time to affairs of state, to service to the public. The same thing was true to a greater or less extent of the feudal barons and the gentleman class. Whenever, up to modern times, we discover a leisure class, we find them using their time for the development of a certain type of individual. In this development, appreciation, creation, service are large elements

5 *The Function of Leisure Today.*—It is true that these same elements are found in the midst of our profit-making, power-seeking, efficiency-mad America, but the dominant note is still production, consumption, the exaltation of work, of power, of wealth If we are to meet the problem presented to us by our enforced leisure, if we are to set up the machinery by which we are to realize "the dream of America," it is clear that we must shift our point of view of the function of leisure from that of increasing production and consumption to that of the fullest development of the individual; this means that the dominating function of leisure cannot continue to be merely re-creation for further work and increase in consumption of goods, but must center upon apprecia-

tion, creation, service, for it is by such means that the development of the individual may be secured.

III Guidance for Leisure Time

A. PROBLEMS OF LEISURE TIME

Many problems arise in connection with leisure time Some of these are given on pages 55–56. In general, they center around choice of leisure-time activities, choice of methods of training for such activities, and adjustment to leisure-time activities.

B. LEISURE-TIME ACTIVITIES

1. *Types of Leisure-time Activities* —Leisure-time activities comprise the entire range of human endeavor, for what is vocational activity to one person may be a leisure-time activity to another. In general, they may be said to include hobbies, avocations, sports and recreation, reading, music, arts and crafts, and the entire range of creative work They also involve forms of non-vocational public and personal service.

These may, for general purposes of discussion, be grouped under four heads: (1) escape activities, (2) general culture or appreciation activities, (3) creative activities and (4) service activities These are not entirely distinct but often merge into one another. They represent, however, certain large differences in purpose or objective

2. *Escape Activities* —Escape activities are those engaged in as a way of release from the daily round of labor, they are calculated to make one forget, they must, therefore, be absorbing and as different as possible from the activities of one's vocation. They are, in a real sense, often recreative, for they use muscles and nerve centers not used in the usual daily tasks. By far the great majority of men and women employ their leisure time in ways that are purely or largely escape activities. They read detective stories, romantic novels, yellow-sheet sensational news, the sport page, they go to theaters and movies that appeal to the eye and the ear, that catch and hold one's absorbed attention, with no appeal to the brain; they attend baseball, football, basket ball, polo, ice hockey, and other more or less professionalized sports

that grip the attention and stir one's emotions to the point of forgetfulness; they spend evening after evening at bridge where conversation is taboo and the entire energy of the players given up to the play; they play tennis, handball, polo, golf, and do it as strenuously and absorbingly as they work. They travel, and in order to get the most out of it they join a tourist party where every moment is planned They try to visit as many cities as possible in a six weeks' tour and see all of the Louvre in three hours On shipboard, the thoughtful steward plans every moment of the time, in deck sports, in dances, in special parties, in bridge. Truly, "at work man is sublime; at leisure he is ridiculous."

3. *General Cultural and Appreciation Activities.*—General cultural and appreciation activities are those engaged in where the purpose is not mere escape but the broadening of the outlook, widening of the horizon, keeping in touch with world movements, with scientific developments, the appreciation of music, of art, of literature, and of all that is high and noble in life, the maintaining and deepening of one's intellectual, moral, and spiritual nature. This involves a different type of reading from the escape literature, a different type of theater, of music, a differently planned travel tour, it involves social contacts where the art of conversation is not forgotten, where there is give and take of ideas and stimulation to real thinking It involves cessation from haste, strenuous struggle, taking time to stretch oneself, to think, to enjoy, to appreciate.

What is this life if, full of care,
We have no time to stand and stare

No time to stand beneath the boughs
And stare as long as sheep or cows.

No time to see, when woods we pass,
Where squirrels hide their nuts in grass.

No time to see, in broad daylight,
Streams full of stars, like skies at night.

No time to turn at Beauty's glance,
And watch her feet, how they can dance

No time to wait till her mouth can
Enrich that smile her eyes began

A poor life this if, full of care,
We have no time to stand and stare [1]

4. *Creative Activities.*—Creative activities are those where one does not sit more or less passively and enjoy the creations of another but where one himself creates The field of such activities is very wide and offers opportunity for everyone Under this category would come the production of music, the actual composition of music, painting, sculpture, working in wood, metal, and other materials, cooking, dressmaking, embroidery, writing, and any other activity in which one is not merely a spectator but actually produces something, whether it is intrinsically valuable or not.

5. *Service Activities* —Finally, there are the service activities or things done for others. These may take the form of personal service for a member of the family or for a friend, they may include the larger service activities of citizenship, for city, for state, for nation, and for the world, they would also include activities for various clubs and other social groups. Many creative activities may also become service activities.

6. *Relative Place of Type of Activities.*—Escape activities have a legitimate place in leisure time, but they cannot, as at present, absorb the major part of such time if the complete development of the individual is to be secured and if we are to meet successfully the problem of a large extension of enforced leisure time. Commercialized recreation is largely given over to this type of activity, and there is, therefore, real need for definite attention to and planning for the other more constructive forms of leisure-time activity.

C. THE PLACE OF THE SCHOOL

1. *Necessity for Planned Activities* —Leisure-time activities should be planned as definitely and as intelligently as those of one's vocation. Careful planning is even more necessary, because the activities of one's vocation are usually quite definitely deter-

[1] DAVIES, W H Leisure, from Collected Poems New York Knopf, 1922 (*Used by permission of the publishers*)

mined, and all the individual has to do is to conform to this predetermined pattern.

2. *The Place of the Curriculum*—Intelligent choice and wise planning of leisure-time activities are dependent upon knowledge of the different types of such activities, skill in their use, and real interest and desire to participate in them If this is true, the curriculum of the elementary and the secondary school has an important function in leisure-time guidance. Through the curriculum are developed the skills in reading, writing, art, music, home economics, and industrial art that are absolutely essential to appreciation and to creation; upon this we must largely rely for the development of interest in such activities and desire to participate in them. Before this work can be effectively done, there must be a radical reorganization in our curriculum, possibly more important still, there must be a radical change in the attitude of many of our superintendents, principals, and teachers. However, it should, in all justice, be said that our schools are much more conscious of the problem than are the patrons of the schools and have organized some very effective work in art, music, industrial art, and home economics that goes far toward meeting the problem The difficulty is to persuade the taxpaying public and school boards that such school activities are essentials and not fads and frills, the first to be eliminated when the financial situation becomes acute. Courses in civics and history, in general science, in English, and in geography are being organized in such a way as to help the pupil to get the facts of modern social, civic, and economic life that are important for him and to develop in him interests and attitudes that will really function in his life both in the school and outside it.

3. *The Place of the Student Activities Program.*—While closely related to the organized curriculum, the various forms of student clubs and activities and the general school life contribute much to preparation for choice of leisure-time activities Student participation in the government of the school affords splendid opportunity for acquiring facts about forms of government and for developing right attitudes toward service activities, especially those related to citizenship. The best preparation for civic responsibility in later life is participation in the duties connected with the social group with which one is now connected. The most important of these, for the student, is the school. If

students feel that the responsibility for the government of the school rests partly upon them, they will assume a very different attitude toward the life of the school and toward discipline. One of the reasons why so-called student government is not more helpful in civic guidance is that it is often student government in name only Policies are really decided by the principal, and the officers of the organization are mere puppets moving at the behest of the principal To be effective, real responsibility must be placed upon the officers of the student body; but this must not involve the entire responsibility The government of the school should be a cooperative matter, definite responsibility being delegated to the students for other matters. Problems that arise in connection with the government of the school afford splendid material for group discussions, for assembly talks, for homeroom conferences, and for individual conferences between students and principal or teacher.

The student activities program and the general school life are important factors in the acquiring of facts, the development of skills and attitudes that are very useful in adjustment to others, and in general social relationships. Such attainments are vital in types of leisure-time activities such as appreciation and service activities. The most of one's life is concerned directly with other people, and individual success and happiness are dependent in large measure upon the way in which one gets along with others Individuals differ by nature very greatly in their power to adapt themselves to social situations, for some, the adaptation is very easy, for others, it is extremely difficult, for all, it is largely a matter of training. Everyone needs guidance in social adjustments no matter from what sort of home he may come and no matter how well he may be endowed by nature.

The necessity for definite assistance in manners is well stated by Edgar A. Guest.[1]

> Why is it some people are liked and others greatly disliked? It is not altogether a question of honesty and fair dealing Apparently it has nothing to do with respectability, for many respectable people are not popular It seems to me to be wholly a matter of manners . .
>
> Analyzing the various people who seem always to annoy me and "get on my nerves" is not difficult Some of them are boastful . . .

[1] GUEST, EDGAR, A., The Art of Making Friends, *American Magazine*, 106: 7–9, 141–143, November, 1928.

There are others who are flagrantly selfish in little things. They are openly bad mannered . .

Another type I don't like is simply malicious. Persons of this class have bitter tongues and cruel minds. Their jests always carry a sting . .

The two-faced man or woman is difficult to endure This type leaves a trail of broken confidences behind it

Churlish people are unpopular everywhere. So are people filthy both of person and of speech .

The art of making friends lies in knowing how to avoid these dangers. It seems to me that he who would properly equip his boy or girl for life in this world should begin early with the teaching of manners . .

The man who has many friends has been a friend to many. He has understood the needs of many He has known, without being told, that other people like to have attention shown to them, and he has shown that attention graciously and gracefully He has slighted no man needlessly. He has walked the earth with all men as one of them He has understood the need of all for laughter The fellowship of joy and grief has been an open book to him The chances are he has suffered sorrow, and he knows how deeply it cuts, and he remembers when another is in trouble.

Manners, then, are of very great importance, and manners can be learned. In our cosmopolitan high schools, students need help, there are many social customs of which they are entirely ignorant Their homes do not give help, some one must. Help is given in classes set apart for this special purpose, in the definite provision for social occasions in the school, in parliamentary procedure in student assemblies, and in club and class meetings and private conferences. Some schools utilize the entire school life for purposes of social guidance Formal and informal teas are given to accustom students to such occasions and to train them in conduct proper to the occasion, parents' receptions are organized with the help of students, occasions are made for introductions, formal and informal dances and parties are employed, invitations are issued, letters of acceptance or of regret are sent These are all organized and administered with the definite purpose of giving students the most practical help and training in methods of social conduct and forms of social usage Such questions are often considered in homeroom discussions. Several very helpful manuals on manners have been written and are now being used in the schools. The booklet often published and sometimes

called the "Freshman Bible" frequently contains valuable suggestions on what to do and what not to do Some of these, especially those in use in colleges, place quite unnecessary restrictions upon the activities of the freshmen, but on the whole there are very helpful devices

Student clubs often serve to develop or to deepen interest in desirable activities that develop into hobbies or avocations in later life and function as leisure-time activities, cultural and appreciative, creative, and service

The physical education program is directed partly toward the development of skills in certain games, group and individual, and partly toward the development of an interest and desire to continue such participation after one's school life is over. If this work is to become really effective, studies must be conducted that will show the effect that certain forms of recreation have upon the physical and mental life and the forms that are best adapted to meet the needs of different types of people. We need to examine our school program of athletics and student clubs to determine what ones will be helpful in after-school life We already have some data on this point We know, for example, that the great majority of people, after they leave school, will not play football, baseball, hockey, or basketball They are far more likely to play golf or tennis or volley ball or to swim or to go hiking or to dance Group play is valuable in many ways and should not be neglected, but directors of physical education are coming to feel that such games should not crowd out forms of recreation in which most people will engage after they leave school. Definite provision should be made in school for the development of an interest in these forms of sport

4 *Adelphi Academy Program.*—Many schools are organizing their informal activities in such a way as to prepare their students for leisure time Adelphi Academy in Brooklyn, N. Y., has a very interesting plan [1]

> This project affects the six-year old boys and girls in the primary department as well as all pupils in the high-school department. The little children, following their luncheon, lie down on cots for relaxation for half an hour. There are other shorter periods of rest throughout the morning.

[1] Quoted from *The Nation's Schools*, Vol 13 15 April, 1934.

The junior and high-school pupils have their luncheon either at long tables or "cabaret style," with three or four pupils at a table, and are permitted to linger over milk or grape juice Coffee and candy are not served to the pupils During the leisure period there is dancing in the social hall of the high-school building in charge of an instructor Charts on the walls show the latest dance steps. An adjoining room is given over to pupils who are interested in contract bridge, with a member of the faculty serving as teacher and adviser for the players

Moving pictures are shown in the auditorium to an audience composed largely of fourth-, fifth-, sixth-, and seventh-grade pupils The films are essentially educational, with occasional cowboy and sports movies on the program

Dramatic groups rehearse on the third floor of Adelphi's Pratt Building, which is the junior high-school social center Elsewhere on the floor pupils indulge in ping-pong, listen to the radio, work jigsaw puzzles, or play chess Pupils who prefer to use the leisure periods for voluntary study join a study group under an instructor.

Once a week a reading club meets in the library with a faculty member to discuss contemporary literature and the week's new books Three days a week a group meets with the headmaster for a study of "How to Read Your Newspaper."

The gymnasium is also popular during the leisure hour, where special athletic instruction is supervised by the boys' director on the first-floor gym, and the girls' director on the fifth-floor gym. For health consultations, a registered nurse is available.

"This program is developing not only interest in varied activities among the pupils," said Mr. Slater, the headmaster, "but indicates discrimination as well The whole effort demonstrates an undoubted socializing value The fact that these pupils are offered a variety of wholesome activities for their free time seems to promise that they will not be lost or bored into foolishness and uselessness during their future leisure hours."

D. THE BASIS FOR CHOICE

1. *Need for Varied Activities.*—One of the most important things to keep in mind in selecting leisure-time activities is that no one type should be exclusively indulged in. In the new leisure, everyone should select some of each type of activity that leads to real development. For some, it may even be wise to select an escape activity, but this should certainly not be the major part of one's choice.

2 *Choice of Escape Activities* —To one who is burdened with care and anxiety, who has long hours of arduous toil, escape activities are often valuable as restoratives of health, of poise, and of balance of mind. When such activities are chosen, they should be as different as possible from the activities in the daily job Thus, if one's job is an indoor sedentary one, an outdoor activity should be chosen that requires physical effort. If one is engaged in outdoor strenuous physical exercise, it may be wise to choose an indoor, relatively quiet, leisure-time activity. Of course, practically all activities—appreciative, creative, service—provide escape if they are sufficiently different from the activities of the job. Nearly all so-called escape activities also provide some appreciation or some possibilities of creation and of service. Attendance at sports, amateur and professional, is sometimes recommended by physicians as an aid to health and as relief from fatigue and worry

3. *Choice of Cultural and Appreciative Activities.*—Someone has said that fullness of living is determined by the character, the depth, and the intensity of one's appreciations. Choice of such leisure-time activities is of vital importance to everyone. Such choice should be partly determined by the opportunities for appreciation and for culture in one's daily occupation. Care should be taken to provide for great breadth of appreciations, intellectual, spiritual, and aesthetic. Many men, like Darwin, have lost their power to enjoy poetry because their entire attention has been focused upon other things Time should be spent in attendance at concerts, visiting art museums, walking in the open woods and fields, studying the starry heavens, the structure of the earth. We should pause long enough to view with wonder and awe a Niagara Falls, a Grand Canyon, a Yosemite, a Lake Louise, the breath-taking beauty of a sunset.

> When I behold the works of Thy hand,
> The sun and moon and stars that Thou hast ordained,
> What is man that Thou art mindful of him
> And the son of man that Thou visitest him?

Whenever one becomes conscious of a narrowness in his world of appreciations, he should definitely choose such activities as will secure breadth and variety. The same general attitude should be taken toward other elements of culture. Each man should

periodically take account of stock and definitely plan activities that will keep him in touch with economics and social trends, with the development of science, with great world movements, he should provide also for social contacts, for living, feeling, working, playing with others.

4. *Choice of Creative Activities.*—The creative activities open to one are determined largely by native ability and early training. This makes of fundamental importance the early discovery of ability and talent and the definite provision for the development of sufficient basic skills to make possible later activities. The great majority of people have sufficient native ability to enable them to take part in several different forms of creative activity either on the low level of mere performance or the high level of real creation. Ability to play a musical instrument or to sing or to achieve self-expression through line or color or design in cloth, in wood, in iron, or clay—these are possibilities for practically everyone. Such leisure-time creative activities should be chosen as will supplement those experienced on the job. Native talent should, of course, be a factor as well as the time and money that would make possible indulgence in such activities.

5. *Choice of Service Activities.*—Service activities are the duty of everyone. We are all bound so closely together that each one must contribute to the well-being and the development of others. Some service activities constitute the common citizenship duties of all. These call for wise choices of officers, local, state, and national. Anyone who refuses to vote or neglects this duty is recreant as a citizen. The quality of the men who hold office is not due to the rotten professional politicians who dominate elections, but to the ordinary citizen who is unwilling to spend the time and energy necessary to inform himself of the issues involved or the qualifications of the candidates or, if necessary, to run for office himself. Beyond these common citizenship duties lies a whole field of voluntary activities for the state at large, for different social groups, and for individuals. Membership in business clubs, women's clubs, parent-teacher associations, church organizations, and welfare drives, to mention only a few, provides fields for service activities that should be carefully considered and from which selection should be made. Some part of the larger leisure forced upon us should be spent in one or another form of such service activities. The service occupations—teaching, the

ministry, medicine, social work, and, to some extent, law—provide opportunity for all three forms—(1) culture and appreciation, (2) creation, and (3) service—but this does not free these workers from the obligation of participation in other forms of activity. The ideal in any case is the attainment by each individual "of the fullest stature of which he is innately capable and to be recognized by others for what he is, regardless of fortuitous circumstances of birth or position"

QUESTIONS

1 Is it possible for everyone to develop a well-rounded life?
2 Is idleness a sin?
3 What are the purposes of leisure time?
4 Is efficiency or a rounded development the ideal?
5 What place in the life of America is there for a hobby?
6 What is the place and function of manners in the life of the individual?

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Chapter XXIII

THE ORGANIZATION OF GUIDANCE

I. General Policies of Organization

1. *Guidance a General Function.*—From the preceding discussion of guidance, it is very clear that guidance is not something that can be separated from the general life of the school, nor is it something that can be located only in some particular part of the school; it cannot be tucked away in the office of counselor or in the employment bureau. It is a part of every activity of the school: some form of guidance is the duty and the responsibility of every teacher in the system. It is, then, a function that is shared by all and must be so administered. The problem of organization is one of coordinating the guidance activities of the school in such a way (1) that all the forces of the school shall be brought to bear in a unified and consistent way upon the problems of each child, (2) that definite, primary responsibility for parts of guidance shall be placed upon certain individuals and certain agencies, (3) that the work shall be so divided that each person and each agency shall know what its particular duty and responsibility are—the things for which it is primarily responsible and the ways in which it merely contributes to the work of some other agency; and (4) that the individual pupil shall have unified assistance, so that he may not be confused by a multiplicity of counselors. This is often a very difficult thing to accomplish.

2. *The Child's Needs for Guidance.*—Before we consider the machinery of guidance, it may be well to review briefly the needs of the child for guidance and discuss guidance functions as performed by a few typical agencies within and without the school. This may help us in our general thinking.

What, in general, are the child's needs in guidance?

1. He needs facts regarding himself, regarding schools, regarding occupations and other phases of life, and such training as will enable him to get facts for himself and to use facts intelligently.

2. He needs opportunities for useful experiences, for try-outs and for explorations, for developing new interests, and for discovering his abilities.

3. He needs wise counsel, watchful care, by those trained and competent to give such help. Keeping in mind these needs, suppose, for purposes of illustration, that we consider for a moment one or two agencies concerned with guidance and try to locate, in a few cases, primary responsibility for certain phases of guidance, showing also the necessity for cooperation in all phases of the work

3. *The Function of the Classroom Teacher.*—Suppose that we first consider the guidance function of the classroom teacher, for some of the most important aspects of guidance are found in his so-called regular studies. Obviously, the classroom teacher is primarily responsible for assistance given to the pupil in connection with his subject But here at the outset we see the dependence of the classroom teacher upon other agencies if he is to do his work well If he is to teach effectively, he must have facts about the pupil which can be obtained only by experts other than the teacher. Some of these facts have to do with home life and with the economic and social conditions of the parents, others with results of intelligence tests, still others with health conditions. Obviously, even teaching, which is guidance, can be effectively done only by the cooperation of all the forces of the school and the community The teacher is not responsible for gathering these facts. This must be done by others, but he needs the facts in order to do his own job of guidance well. The classroom teacher is also jointly responsible for conduct, for development of character, for punctuality, and for many other phases. He cannot, however, ordinarily successfully give guidance in connection with occupational choice or with choice of school, because he does not have the intimate knowledge of occupations or of schools that makes it safe He does know his subject Guidance in choice of school and occupation necessitates just as specialized knowledge and experience of schools and of occupations as the teacher is supposed to possess of his subject.

4. *The Function of the Homeroom Sponsor.*—The homeroom sponsor has somewhat different functions in guidance These center more largely around problems of adjustment to school, school citizenship in the large, social adjustments of various

kinds. His relation to the home is somewhat more intimate. But here, again, he does not have the detailed information regarding many phases of guidance—vocational and educational especially—that makes it safe for him to take charge of these guidance functions.

5. *The Function of the Counselor.*—The counselor, properly conceived, is a trained specialist and as such has certain definite functions in guidance Some of these are discussed in Chap. XVII. As now organized in our schools, the counselor's functions differ in different schools; his job is a varied one. Sometimes, counselors teach most of the time; at other times, they are vice principals spending most of their time in routine matters, in cases of discipline, tardiness, etc Often, their responsibilities are for the vocational aspect of guidance, in a few cases, they are really visiting teachers In many cases, they are actually deans of girls and deans of boys There is emerging, however, a rather clear-cut notion of some of the duties and functions of the counselor and a general agreement as to type or types of training required We shall not here attempt to outline in detail the duties of the counselor but shall merely point out a few and try to show how the work of the counselor dovetails into and is dependent upon the work of other parts of the school.

The counselor is not primarily a teacher, nor is he an attendance officer, nor does he have charge of cases of discipline or spend his time in checking lateness or in keeping the school records He is an expert a chief part of whose function is adjustment of the pupil—school, vocational, personality These may or may not be combined in one person, but they are parts of the function of the counselor The job involves personal contacts, group conferences, intimate relationships such as few teachers have the time or the ability to make

But it is very clear that no counselor can function properly without the cooperation and assistance of other parts of the school He must have at instant command all available facts about each pupil—school records, home conditions, both mental and achievement tests—he must have facts about schools, about conditions of labor and other occupational information Some of the responsibility for adjustment he shares with classroom teacher, with homeroom sponsor, and with principal, but, except for guidance in relation to school subjects, he is primarily responsible

for performing the guidance function He is supposed to be an expert in the field of guidance.

6 *The Interdependence of Agencies* —While we probably do not agree on the functions of the classroom teacher, the homeroom sponsor, the counselor, and the distribution of these functions, we must admit the interdependence of guidance functions This should continually be kept in mind in any scheme of guidance

7. *The Child the Center of Effort* —In setting up the machinery by which any part of our educational system is to be administered, we are always in grave danger of losing sight of the real function of the machinery That we do this is seen every day in our schools. Daily schedules, curriculums, laboratories, libraries are organized for ease of control and smoothness of running, rather than with an eye single to the education of the child. Education is too often sacrificed for uniformity and precision—efficiency, as we call it Learning, the chief function of the school, is subordinated to teaching; guidance, to administration For this reason, the administration of guidance should begin with the child to be guided and his needs. We should ask what is necessary that he may be guided Then we should work out from this to those most closely associated with him and then to the more remote agencies. After this, we may give our attention to an organization that will make it possible to center the energies of all concerned in the efficient guidance of the child himself.

8 *Screening the Guidance Functions* —A very interesting and effective method of showing the functions of some of the guidance agencies in school has been worked out by Richard D. Allen of Providence [1] Figure 24 is a reproduction of the chart used by him and is largely self-explanatory. He thus describes the operation of screening:

> The first screen represents the guidance job of the principal. The gauge is set large enough so that all functions that can be delegated to others will pass through The criterion or gauge is that of administrative and supervisory responsibility for guidance in his school He is responsible for creating the organization and conditions necessary for

[1] ALLEN, RICHARD D Delegating the Guidance Functions within a Secondary School, *The Vocational Guidance Magazine*, 10 14–19, October, 1931 See also ALLEN, R D , STEWART, F J , and SCHLOERB, L. J · Common Problems in Group Guidance, for a similar schematic arrangement. chart opposite page 5

SCREENING THE GUIDANCE FUNCTIONS

FUNCTIONS THAT PASS THROUGH THE SCREENS CAN BE PERFORMED MORE EFFECTIVELY BY OTHERS— ALL ARE NECESSARY

GUIDANCE FUNCTIONS OF THE PRINCIPAL

1 Organization of Guidance Program and Department
2 Selection, Training and Supervision of Advisers
3 Supervision of Subject and Home Room Teachers
4 Spirit and Morale of the School
5 Continuous Revision of School Program and Curriculum
6 Development of Extra Curriculum Program.
7 Problem Cases Referred by Advisers

1 2 3 4 5 6 7

GAUGES OF SCREENS

Responsibility for Administration and Supervision

GUIDANCE FUNCTIONS OF EACH SUBJECT TEACHER

1 Arouse Interests and Develop Right Attitudes.
2 Stress Occupational Information of the Subject.
3 Arrange Tryout Projects in the Subject.
4 Encourage and Develop Special Abilities
5 Remedial Instruction in Subject Handicaps
6 Lead a Club or Activity.
7 Cooperate with Adviser and Home Room Teacher

1 2 3 4 5 6 7

GOOD TEACHING

Interest in Subject.
Interest in Pupils
Good Subject Motivation
Develop Leadership
Attention to Individual Differences
Team Work
Professional Spirit.

GUIDANCE FUNCTIONS OF EACH HOME ROOM TEACHER

Home Room Teachers are also Subject Teachers

1 Helpful, Friendly, Personal Interest in Each Pupil
2 Orientation in School Life and Routine.
3 Records, Reports and Attendance
4 Develop School Citizenship, Leadership, and Personality
5 Cooperate with Advisers and Subject Teachers

1 2 3 4 5

EVERY TEACHER'S WORK

Administrative, Social and Professional Duties
Professional Spirit and Love of Youth

OUTSIDE SPECIALISTS USED BY THE ADVISERS

1 Health Services
2 Attendance and Home Visitors
3 Psychological and Testing Service.
4 Mental Health Clinic.
5 Placement Office

GUIDANCE FUNCTIONS OF THE CLASS ADVISERS

1 Personnel Records and Research in Individual Differences and Adjustments
2 Individual Counseling and Adjustment.
3 Orientation Instruction Educational, Vocational and Social Problems.
4 Follow Up of All Pupils.
5 Utilization and Cooperation with Special Services.

1 2 3 4 5

Tasks Requiring—
Special Personality
Special Training
Special Program
Insuring Time for Work and Continuity

The Adviser Performs only those Functions that cannot be Performed Effectively by Others.

FIG. 24 —Screening the guidance functions

the success of the program. Some of these duties he may share with other administrative or supervisory officers, but he is very largely responsible within the limits set by the superintendent Such matters as the selection and training of advisers, curriculum revision, and problems involving unusual expenditures are usually questions that require the approval of the superintendent or supervisors. On the other hand, such matters as the programs of duties and responsibilities of home-room and subject teachers, the school program, extra-curricular activities, and school morale have long been recognized as the province of the principal.

The second screen is that of the guidance functions of the subject teacher The gauge is set so that all of the guidance functions that are not inseparably connected with *good subject teaching* will pass through The subject teacher is expected to perform only the functions which are inherent in her work if it is to be done with the greatest possible effectiveness. Every good subject teacher is expected to be deeply interested in her subject and in her pupils in connection with the subject She is expected to motivate or "sell" her subject, to give attention to the problems of individual differences as they are related to interest and achievement in the subject, and she is expected to develop leadership and to have a fine professional attitude toward such duties as leadership in voluntary club activities related to her subject and in her relations with other teachers

No subject teacher should claim that such a gauge, good teaching, would leave her burdened with guidance duties for which others are paid Her duties would include (1) arousing interests and developing right attitudes concerning her subject; (2) stressing the occupational applications and implications of the subject, (3) arranging tryout projects that will challenge pupils, (4) encouraging and developing the special interests and abilities of pupils as they relate to the subject; (5) insuring timely remedial instruction to handicapped pupils in order to prevent failure; (6) leading some type of club work related to the subject, and (7) cooperating with the class adviser in the service of the pupils No subject teacher should feel that he is being robbed of his guidance function by the organization of a guidance department. Every task that he can do better than the class adviser is still his

The third screen is that of the guidance functions of the homeroom teacher. In many schools the gauge on this screen is so small that the task of the home-room teacher is well-nigh impossible Untrained in the principles and practices of educational and vocational guidance, without adequate records, without time or training for the study of individual differences, without time for interviews with pupils, and without an adequate curriculum or training for group guidance instruction, the teacher finds that all of these functions are crowded into a

home-room period. Continuous follow-up surveys of graduates and others are impossible under such a scheme It is equivalent to saying that guidance can be done by anyone, without training, without tools, and without materials The best that can be said is that it is a beginning.

The gauge of the home-room teacher's screen should be set so that it will retain only those functions which *do not* require (1) a specially selected person, (2) special training, and (3) a program that insures continuous and frequent contact with the same group of pupils over a period of more than two or three years. His functions should include only those which every teacher can and should perform as part of his administrative, social, and professional duty, and those dictated by an unselfish professional spirit of service and love of youth.

These functions include (1) a helpful, friendly, personal interest in pupils with daily contact in the home-room period and before and after school hours, (2) orientation in the life and administrative routine of the school; (3) the keeping of necessary records, reports, attendance data, etc., which often provide occasions for friendly advice and assistance, (4) the development of school citizenship, leadership, social niceties, and individual personality, and (5) cooperation with subject teachers and advisers of home-room pupils There are none of these functions which cannot or should not be performed by all teachers, with proper training and supervision by the principal within the school. They do not belong to subject teachers or class advisers, and unless they are performed by the home-room teacher, the school will have failed in its responsibility to that degree.

The fourth and last compartment is not a screen. It has a solid bottom. The adviser cannot shift the final responsibility. He may require the assistance of such special services as the health clinics, the mental hygiene clinic, the laboratory for individual testing, the home visitor, or the placement office, but the pupil will always return to the counselor for advice or for follow-up.

The functions which the adviser performs are fourfold (1) personnel records and research in the study of individual differences and in the adjustment of individual pupils, (2) individual counseling and adjustment; (3) orientation instruction in educational, vocational, and social problems, and (4) the follow-up of all pupils, both graduates and non-graduates The adviser's pupil load must not be an impossible one, usually between 200 and 300 pupils. The orientation course should be arranged so that he can meet each pupil twice a week. Time for counseling and records must be provided. Research and follow-up are usually out-of-school duties.

9 *Simple Organization Best*—In the development of a plan for the administration of guidance, it is the best policy to keep

the organization as simple as possible and to have different parts grow out of the actual needs of the system Complicated machinery often seriously interferes with the real function of the work, it sometimes takes so much time and money to run the machinery itself that the actual guidance of the student is neglected. We must never lose sight of the purpose of the machinery—to help the individual. If we allow the machinery to be developed as the need arises, we shall avoid this danger to a large extent There are, however, some disadvantages in this plan A school may begin in a small way to do guidance work—some teacher or the principal starts it; as the work develops, need is more clearly seen and further agencies are needed But the guidance has all been done by one person and to introduce new agencies will necessitate taking away from the one who started the work part, at least, of what he is doing. Sometimes it involves taking away all of the work from him and giving it to someone who is better qualified than he This always creates an unfortunate situation; it seems ungrateful to penalize the very one who has started such an enterprise. Wise and tactful management on the part of the principal or superintendent is all that can overcome such difficulties.

10. *Plan of Discussion* —No attempt will here be made to show an ideal organization for guidance There is no such organization Several plans now in use will be described, however, and certain suggestions will be made Two general types of chart or graph are used for this purpose. One presents the organization from the standpoint of the responsibilities of the various parts of the organization and their relationships to one another The other tries to show the part each agency plays in guiding individuals. Both are necessary to a clear understanding of the problem. The one constructed by Jesse B. Davis, and shown on page 411, attempts to show both of these functions in one diagram

II THE SMALL-SCHOOL SYSTEM

In a small-school system the organization should be very simple and such that it can be administered with a minimum of time and effort. Figure 25 shows such a plan.

Here the superintendent or principal appoints from among the teachers a special committee on guidance. He may act as

the chairman of the committee, or he may delegate this duty to some teacher who is especially interested and well qualified. This committee studies the problem of guidance in the school, devises plans, and is responsible for the development of these plans in the school, of course, always subject to the approval of the superintendent or the principal The members of the committee work with classroom teachers and the homeroom sponsors, if there are any homeroom sponsors. They secure the
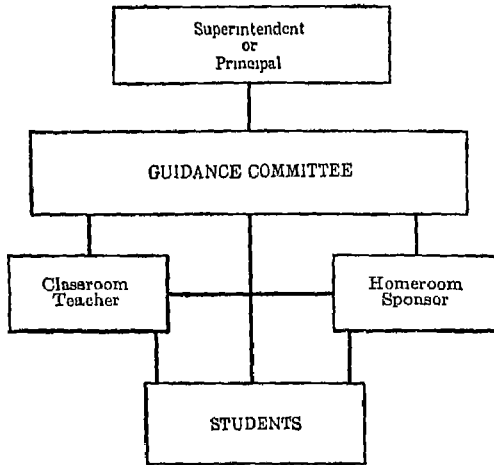
FIG 25 —Organization of guidance in a small-school system.

cooperation of all forces in the school in the work of assisting the pupil. They may divide the work among themselves, one being responsible for the adjustment of the students to the school, another for the occupational aspects of guidance, and another for further education guidance. Often, most of the special work is done by the chairman of the committee The effort is made to locate definite responsibility for certain phases of the guidance program among classroom teachers, homeroom sponsors, and special workers. The most important part of the initial work is always found to be that of "selling the idea," of focusing the attention of all in the school upon the problem of guidance—the need for help and methods of helping students. In a small school, it is practically always necessary for the work of guidance to be done by regular teachers, often as additional work, although it is very desirable that provision for such work shall be made in

the teaching load. One of the advantages of this plan is that it provides a means of interesting all teachers in the study of guidance problems and furnishes a basis for specialization as the school increases in size

III. The Large-school System

A larger school or school system necessitates an organization that is somewhat more complicated. Even here, the work usually begins, as was described in the small school, with some one teacher or several teachers becoming interested and starting the work as an additional task The organization of guidance in the larger schools will be seen more clearly if we first consider it from the standpoint of the guidance functions as they appear in the high school.

1. *New York State Plan.*—One of the best diagrams from this point of view is the one prepared by Mr Hutcherson of the State Education Department of New York.[1]

This chart is arranged in such a way that the four functions of guidance, (1) research, (2) cooperation, (3) placement and follow up, and (4) counsel are shown in their relationship. Research is carried on in problems related (1) to pupil study, (2) to occupational opportunity, and (3) to educational opportunity. Cooperation is secured with various interested agencies such as Chambers of Commerce, higher educational institutions, employers and labor, etc Placement and follow up are carried on through a central placement office in cooperation with employers, state and national organizations, and various types of schools. Counsel is given by means of conferences with deans, counselors, teachers, etc , through life-career classes and try-out courses; through individual counseling, by means of case studies, home visits, etc. The central place and the importance of the system of records are also shown.

Schools and school systems should study this arrangement very carefully and see whether the various functions described are represented in some way in their organization of guidance It is vastly more important that these functions have some place in

[1] *University of the State of New York Bulletin*, Vocational and Educational Guidance in Junior and Senior High Schools, Albany The University of the State of New York Press, 1927, No 887.
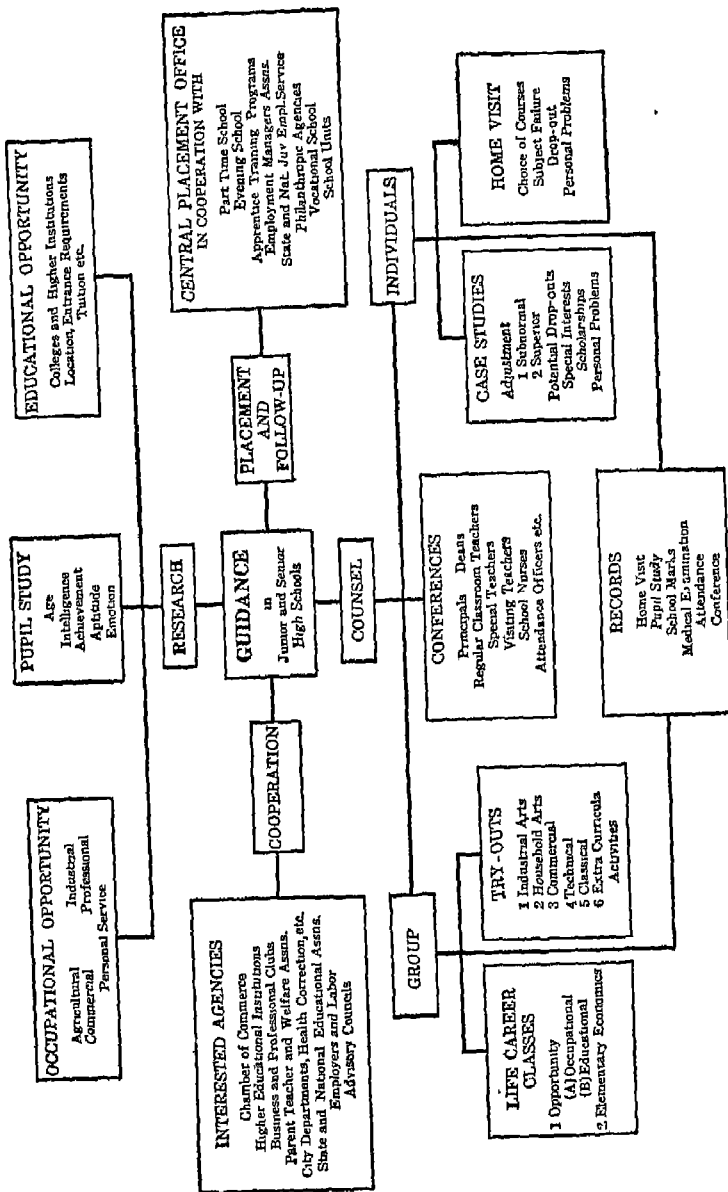
FIG 26 —The New York State plan for the organization of guidance

the scheme of organization than that the exact form of organization should be copied In fact, such a form of organization as this could not be successfully used in many cities

2. *Rochester Plan.*—Figure 27 shows the general plan in operation in the Monroe High School in Rochester, N. Y.

The Guidance Department is responsible for the organization and administration of the entire work of guidance in the school.
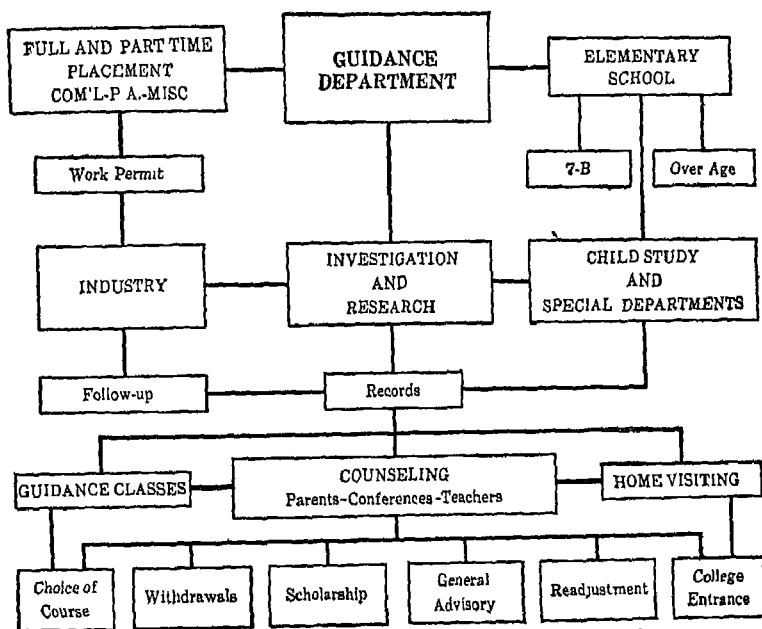
FIG 27—The Rochester plan for the organization of guidance

Working with the elementary school and the Child Study and special departments, shown at the right, and with the placement service, industry, and follow up, shown at the left, and also conducting investigation and research, the department gathers together data for the records These records are used for guidance classes, for counseling, and for home visiting. The counseling, together with guidance classes and home visiting, functions in (1) choice of course, (2) care of withdrawals, (3) improvement of scholarship, (4) general advising, (5) readjustment and (6) college entrance. Contact is maintained with various agencies throughout the city—social agencies, service

clubs, etc —both in securing information and in providing for general assistance in the guidance work

3. *La Salle-Peru Township Plan* —Another suggestive chart is that describing the work in the La Salle-Peru Township High School [1]

This chart shows the responsibilities, (1) of the principal to the Township Board of Education, (2) of the Bureau of Educational Counsel to the principal, and (3) of the Director to the Bureau. The rest of the diagram is concerned with a description of the ways in which the counseling is effected. The agencies involving psychological and social work are organized to assist in selection of courses and occupations and for follow up. The social case work is done in cooperation with the Illinois Institute for Juvenile Research The entire organization is directed toward the guidance service—social, educational, health, vocational, and ethical. It is in the charge of a trained expert, the director, who is a member of the faculty, who is responsible directly to the Bureau of Educational Counsel. This bureau is composed of (1) the superintendent of schools, (2) the staff (director, assistant director, and secretary), (3) an advisory committee for the Illinois Institute for Juvenile Research, and (4) the Township Board of Education. The entire problem of guidance is considered as an educational problem and is so administered. While this plan involves the expenditure of more money than is available for most cities, and necessitates such a cooperation with well organized agencies as is not possible in many cases, it emphasizes the need for expert assistance and shows the possibilities of coordinating the agencies of the community.

4 *Providence Plan* —Figure 29 shows the organization of guidance in the high schools of an entire city, Providence, R. I. This is an excellent and complete system, which provides for expert assistance in nearly every phase of guidance work. The testing program is well taken care of, and placement and follow up are provided for both in a general placement office and in each high school. The entire work is in charge of an assistant superintendent who works through the high-school principals as a

[1] THE BUREAU OF EDUCATIONAL COUNSEL, *Report for* 1923–1926, La Salle, Ill Township Board of Education, 1927, p 10.

committee. The center of the program is the system of class advisers who are given a definite amount of time for counseling. For each adviser there is a committee of homeroom sponsors.
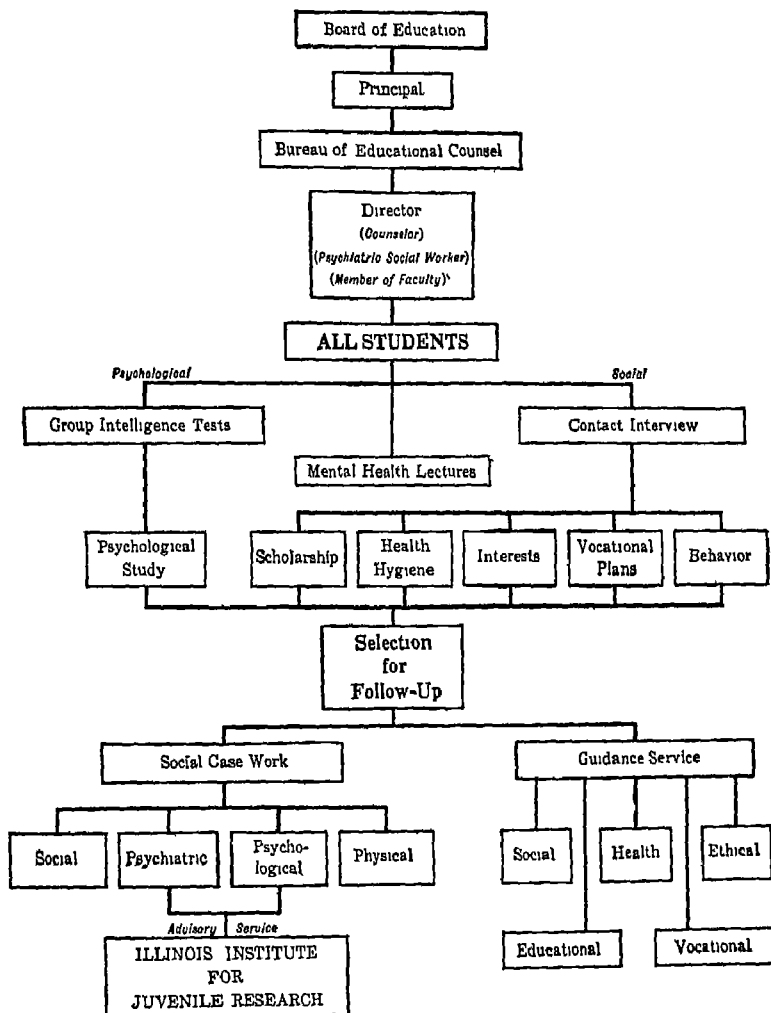
FIG 28.—The La Salle-Peru Township plan for the organization of guidance

Frequent conferences of advisers and these committees are held, when problems of individual students are discussed and general policies decided upon. There is a somewhat similar

organization worked out for the junior high schools Under the charge of Assistant Superintendent Richard D. Allen, this plan of guidance has accomplished splendid results
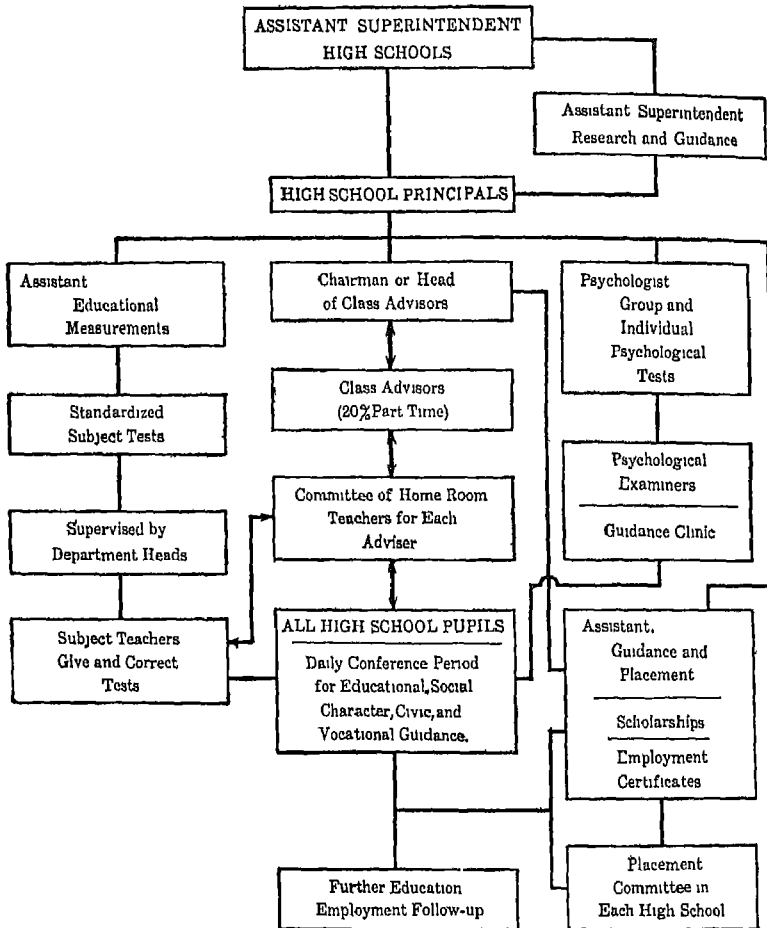
FIG 29.—The Providence plan for the organization of guidance

5. *Plan by Davis.*—One of the best diagrams is that worked out by Jesse B Davis[1] and shown in Fig 30.

[1] NATIONAL ASSOCIATION OF SECONDARY-SCHOOL PRINCIPALS, Committee on Guidance, Guidance in Secondary Schools, *Bulletin* No. 19, Cicero, Ill, January, 1928, p. 8

This shows the organization suggested for a single high school. Very little is said about a city-wide plan, but it is understood that cooperation in a city-wide plan of guidance would be effected
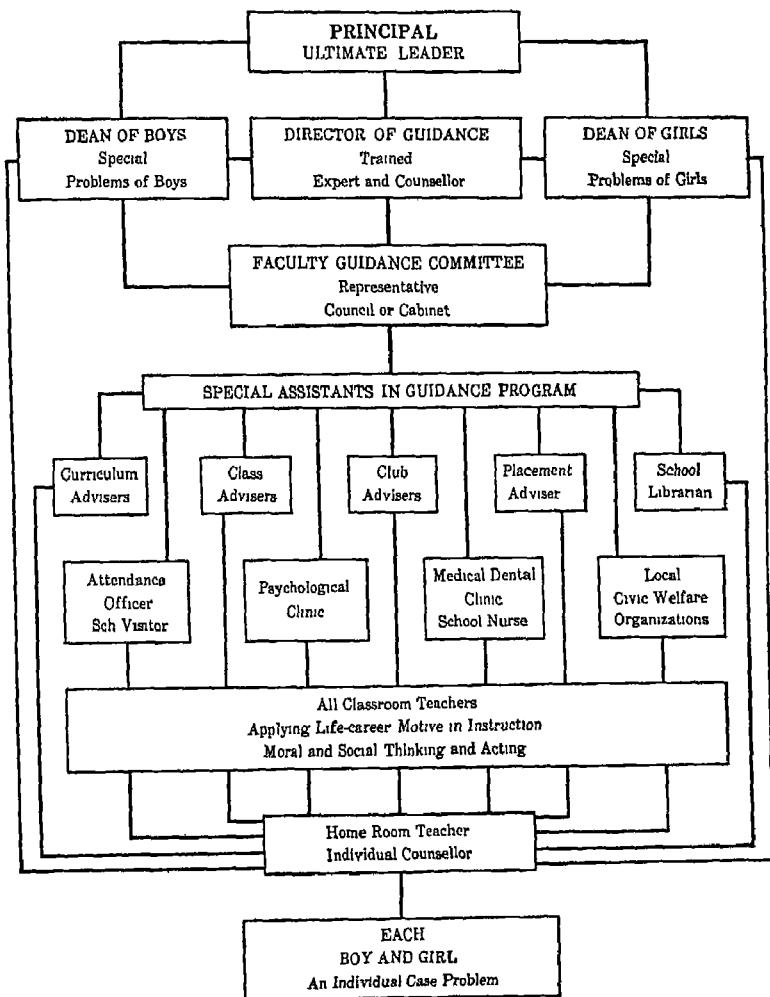
FIG 30 —Plan by Davis for organization of guidance

through the "director of guidance" of the school or the "counselor."

The essential features of the plan are clearly brought out in the chart The general program of guidance is administered

under the ultimate leadership of the principal, but the work of guidance is the direct responsibility of the director of guidance, who works with the dean of girls and the dean of boys and who is assisted by a faculty guidance committee. This committee is made up largely of special assistants who are, for the most part, teachers who have special qualifications for certain kinds of guidance work. All educational, medical, psychological, social, and civic welfare organizations are utilized for securing information and assistance. The foundation of all guidance, according to Davis, is in the homeroom, and the homeroom sponsor must function in all forms of guidance

Finally, and most important, is the individual boy and girl

> While a great deal can be accomplished in the program of guidance by handling the pupils in various groups, the most essential consideration is the individual boy and girl. Each pupil must be studied as a case problem The entire structure of the organization for guidance must be built with the purpose of giving to each pupil every possible advantage and assistance in finding himself, in making such decisions affecting his life career as the school system forces upon him from time to time, and in making a right start during the formative years of his life.[1]

These schemes for the organization of guidance have been presented not as models that can be adopted and put into operation by a school or a school system, but as samples of what is now being done in various cities, and as examples of the variation in the schemes used for carrying out the purposes of guidance. It may be that no school should attempt to put into operation any of the schemes described. Conditions vary in different localities, and guidance programs must be adapted to the peculiar needs of each locality Superintendents and principals should, however, find very valuable suggestions in these schemes that will assist them in planning an organization that will work and that will embody the important features of a real guidance program.

6. *Variations in Organization* —When we study the various plans in operation, it is at once apparent that no two cities or schools agree upon a plan of organization. This is both natural

[1] NATIONAL ASSOCIATION OF SECONDARY-SCHOOL PRINCIPALS, Committee on Guidance, Guidance in Secondary Schools, *Bulletin* No 19, Cicero, Ill, January, 1928, pp 16, 17.

and wise, for no one knows what plan is best. In each school and city, that plan is best that secures for the children in that school or city the best and most efficient guidance. In his survey of guidance, Reavis[1] found four general types of program in operation: (1) centralized bureaus of guidance for secondary schools in city systems, represented by Boston, Chicago, and Cincinnati; (2) city-school systems with a central guidance organization but with the individual secondary school considered the unit in the program, represented by Providence and Milwaukee; (3) centralized bureaus or departments in individual secondary schools, represented by the Milwaukee Vocational School and the Township High School and Junior College, La Salle, Ill., (4) central guidance organizations in individual secondary schools which utilize regular officers and teachers as guidance functionaries, represented by the Joliet Township High School and Junior College, the Thornton Township High School, and the New Trier Township High School. Virtually the same guidance activities are undertaken under the different programs. The chief variations consist in the methods employed in the several school systems and individual schools and some difference in emphasis on certain phases of guidance activity, such as vocational guidance, educational guidance, or psychiatric social guidance.

7. *General Principles for Organization.*—All surely will agree that most of the guidance itself must be done in the school where the pupil is located, it cannot be considered to be a function of the central organization. Here is the place where personality and school adjustment are made; where choice of subjects, of schools, of occupations is made, where facts regarding the individual, regarding occupations, and regarding schools are assembled and used, even where initial recommendations for jobs and for schools must be made. The best organization in a school involves placing someone in general charge of the entire guidance program, at least that part related to vocational and educational guidance. This person should be an expert in guidance. He should have an active, working group of people, a committee for the organization of guidance in the school and especially for selling the guidance idea to all teachers. These should be specially qualified persons

[1] REAVIS, W. C., Programs of Guidance, U. S. Office of Education, *Bulletin* No. 17, 1932. National Survey of Secondary Education *Monograph* No. 14, p. 135.

in charge of the two phases of guidance under consideration; possibly there should be a third whose duty it would be to look after special personality adjustment problems—the work of the visiting teacher. Who these people should be or what they should be called is unimportant. Placement work, both that connected with securing jobs and that connected with school and college placement, should be provided, each in close connection with the one or ones in charge of each phase of the work.

8 *Central Organization in a Large City.*—In a large city, there should be a central guidance organization the chief function of which is to promote and coordinate the work of guidance in the city, not only in the schools but also in and among the various service agencies interested. It should be placed directly in charge of someone who has the vision of what guidance is and has the ability to secure cooperation and coordination He may be an assistant or associate superintendent, if he does not have too many other duties to perform. Probably, the actual work had better be under a director of guidance. Whoever he is, he should have the assistance of a carefully selected group or committee from the city as a whole. If the city is comparatively small, probably one person from each school would be sufficient, but if it is large, such a representation would be far too cumbersome for effective work. The function of the director and his committee would be to stimulate interest in guidance, promote a real understanding of the nature of the work, and secure the cooperation of principal and teachers within the school and of agencies and business houses outside the school. In addition to this function, the central agency should maintain a central employment bureau and some system of follow-up work Both of them should, of course, be supplementary to and coordinated with the work in each school. Possibly, the employment office in each school should be a branch of the central employment office The chief work of such central bureaus must be with children after they leave school. The particular part taken by the central agency in the employment work and the follow up must be determined by the conditions in each city.

In addition to these functions of the central agency are other functions that must be performed by some agency. These have to do with testing and research. Each guidance agency, in the school and in the central office, must have at hand results of tests

given by someone competent to give and to interpret them. Each agency must have the results of studies of occupations, both local and general, and each must have the results of studies about schools and colleges. In most cases, these functions are not concentrated in one agency. Probably this is a good practice. The important points are

1. That they be done
2 That someone competent shall do them.
3. That the results be made available to those most closely connected with the actual work of guidance Probably, tests can best be given and results interpreted by a central testing bureau or a research department.

Research studies in occupations can also be efficiently undertaken by a central bureau—possibly the same research department. Studies of schools and colleges and further education in general are now usually conducted by individuals in separate schools. Many facts, at least, could be more efficiently obtained by a central agency, either the research department or the central committee under the director.

9 *Location of Director of Guidance.*—In what part of the executive department of the school should the guidance work, the director, be placed? This we can only answer in a negative way It should not be charged with disciplinary or police duties of any kind. It therefore should not be under the compulsory education department. Guidance workers can contribute materially to the solution of problems of truancy and elimination from school; the entire compulsory education department should have the guidance attitude, but guidance should not be dominated by compulsory education. In whatever department the guidance work is located, it should be free to perform its real function and be provided with ample facilities for carrying on its work

Such an organization as has been described applies primarily to cities of considerable size or to fairly large schools; it cannot be taken over and fully applied in smaller places or in rural districts. In such places, the need for guidance is just as great as in larger places What can be done in smaller localities?

IV GUIDANCE IN RURAL AREAS

1 *Difficulty of the Problem.*—In rural areas, the difficulties of organization of guidance activities are very great. The lack of

trained teachers, the inadequate facilities, the wide dispersal of schools are conditions that make the situation very different from that in urban areas. The type of organization suited to cities is not suitable for rural areas. So far, little has been done for the guidance of rural boys and girls.

2. *Cooperation in Guidance.*—Obviously, any successful plan for rural areas must involve the cooperation and coordination of all forces and agencies that may be utilized. One of the really outstanding developments in guidance during recent years has been the organization of cooperative enterprises, especially in rural districts, under the leadership of Dr. O Latham Hatcher, chairman of the Committee for Rural Guidance of the National Vocational Guidance Association. Under the stimulation of this committee, definite plans have been worked out for cooperation in guidance that promises much for the future. On this committee are men and women representing public and private schools, teacher-training institutions, state departments of education, Y.M.C.A, Y.W.C.A, Girl Scouts, Campfire Girls, Boy Scouts, Business and Professional Women's Clubs, Rotary, Kiwanis and other similar agencies, National Congress of Parents and Teachers, American Association of University women. The committee has held interesting and stimulating meetings and has formulated ways and means of coordinating all these agencies in the work of guidance. Principles have been formulated, suggestions have been made for locating responsibility and determining what sort of activities are safe for certain organizations to undertake and what should be undertaken only by experts. The first report was presented by the annual meeting of the National Vocational Guidance in Washington, in February, 1932.

3 *Outline of the Plan.*—While the plan cannot be described in detail, a bare outline of the principal points agreed upon may serve to explain its general scope.

1. The need for cooperation between all agencies interested in guidance is stressed in order to bring real help to the rural boys and girls and also to avoid overlapping and wasted effort

2. The school is recognized as the primary agency in guidance and should be the center of the guidance activities

3. A guidance committee covering, often, as large an area as a county should be formed, representative of the chief agencies available that can assist in the guidance program

4. Certain guidance activities should be undertaken only by guidance experts; other non-technical activities may be safely carried on by service agencies of various kinds.

5. A definite plan should be formulated for interpreting guidance to the rural communities. A part of this plan is the publication of a rural guidance handbook

6. Experimentation in various plans of cooperation between the public schools and the different agencies available should be encouraged in order to find what are the most desirable methods of cooperation and what will bring guidance aids most effectively to the boys and girls in rural districts.

4. *Experiments in Rural Cooperation.*—This is one of the most hopeful and forward-looking plans yet produced in guidance and bids fair to have a marked influence not only upon guidance in rural areas but also upon all phases of guidance throughout the country. Some cooperative experiments are now in actual operation in various states, notably in Henrico County, Virginia, in Muskegon County, Michigan, in Craven County, North Carolina, and in Rockland County, New York. These plans vary in many particulars. Some have a county director of guidance, under the county superintendent; in other places, cooperation is effected through the State Department of Education; in still others, some teacher with vision and initiative takes the lead and secures a very effective form of cooperation with practically no machinery. In Muskegon County, Michigan, the county guidance council is composed of representatives from Noon Day Luncheon Clubs, the Foreman's Club, Y.M.C A , Y.W.C.A., Employers Association, Chamber of Commerce, the Ministerial Association, Catholic Schools, the Women's Club, Boy Scouts, the superintendents of Muskegon, Muskegon Heights, and North Muskegon Schools, county commissioner of Schools, Elementary School Supervisor, the principals of the Junior High Schools and Senior High Schools of Greater Muskegon, director of the Junior College, Hackley Manual Training School and Part-time School, and counselors in the Greater Muskegon Schools More of these enterprises will be organized in the near future The central offices of Kiwanis and Rotary, Y.M.C A. and Y.W C.A., Boy Scouts, and Girl Scouts are giving full cooperation and have leaflets and suggestions for such cooperation that may

be had by writing to them Some of the results of the plan in Henrico County, Virginia, are described on page 324.

The fundamental principle underlying such cooperative enterprises is that guidance, while primarily a school function, is a community matter and to be adequately administered involves the coordination of all the forces of the community that in any way can contribute to the guidance of young people.

V Difficulties in Organization of Guidance

1 *Danger of Overlapping*—The guidance program has progressed far enough for us to become conscious of the danger of overlapping and of conflict among the various agencies connected with guidance. Such questions as the following are being asked.

1 What is the relation of the counselor to the dean of boys and the dean of girls?
2 Is advice on the selection of studies a function of the counselor or of the homeroom sponsor?
3 Should the counselor work especially with the failure pupils?
4 Should the counselor be responsible for the program of psychological testing or merely interpret the results of such tests?
5 Should the counselor be charged with securing occupational information?

These questions are all of very great importance and must be answered before the guidance movement progresses very far

2 *The Work of the Counselor.*—There is also very real danger that the work of the counselor will be spread over entirely too much ground Some way must be devised by which the personal knowledge of the homeroom sponsor and her intimate association with the student may be combined with facts obtained by experts and all be directed at the guidance of the student. Certainly, the counselor should be in intimate touch with the homeroom sponsor, and the homeroom sponsor should be in touch with counselors and special workers so that each can get a picture of the whole child The question of who shall give the counsel must be determined by many factors, and cannot be settled for all schools and for all situations. In general, that one should give counsel on each particular matter who is in the best position to give it, who knows the facts, who is in the most advantageous relation with the individual, and who can give

it in such a way that it will be effective Guidance can be completely successful only when we secure complete and continuous cooperation between homeroom sponsors, classroom teachers, counselors, and other experts; when we place our reliance upon facts and facts alone; when we have due regard for the opinion of experts; when we unite in a common purpose to provide the best counsel possible for each individual student to the limit of our possibilities. This will often mean that the homeroom sponsor, after finding the general problem of the student, will send or go with the student to the counselor, to the special adviser for occupations or for college entrance, and secure the assistance of such experts in the solution of the problem. It will sometimes mean that the counselor will go with the student to the classroom teacher or the homeroom sponsor and talk over the problems that have arisen Nothing can be accomplished unless there are complete cooperation, sympathy, and understanding.

QUESTIONS

1 What part in the guidance program should the classroom teacher of Latin have?

2 What are the dangers of general counseling by the homeroom sponsor?

3. What are the dangers and difficulties involved in placing counseling entirely in the hands of expert counselors?

4. What are the characteristics of a good counselor?

5. Should counseling be given to those teachers who say that they love to give advice?

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PART IV

THE RESULTS OF GUIDANCE

A PROPHECY

"The work is in its infancy as yet but it is constantly growing in volume and importance. The Director and those associated with him are enthusiastic over the results that have been achieved even in the few weeks since the Bureau was established, but they believe that in order to cover the field in the most complete and adequate manner, the work should become a part of the public-school system in every community, with experts trained as carefully in the art of vocational guidance as men are trained today for medicine or the law, and supplied with every facility that science can devise for testing the senses and capacities and the whole physical, intellectual, and emotional make-up of the child"

FRANK PARSONS, Director and Counselor. Quoted in *The Vocational Guidance Magazine*, 4· 142, January, 1926.

Chapter XXIV

PRESENT STATUS AND FUTURE OF GUIDANCE

I The Development of the Guidance Movement

1. *The Relationship between Guidance and Education.*—We have already seen in Chap. I that guidance is inherent in the process of education. Whenever education as a conscious process began in the life of the human race, then guidance began Whenever and wherever three conditions existed, there was guidance. These conditions are (1) the need for choosing between courses of action, (2) the inability of the individual to choose wisely without help, (3) the possibility of help being given. Guidance has always been given, but the recognition of its fundamental importance in the teaching process and in the learning process is comparatively recent. This recognition has been hastened, if not actually brought about, by the increasing realization of the fact of individual differences in abilities, in interests, and in capacities, and by the waste in human life energy as well as in the processes of production resulting from the wrong choice of vocation.

2 *Beginning of the Guidance Movement*—The organized guidance movement began in this country with an attempt to give assistance in selecting a vocation and in securing a job. It is generally recognized that the first step in this development was the organization of the Boston Vocation Bureau, in 1908. This bureau was organized on plans developed by Frank Parsons, who, with Meyer Bloomfield, is recognized as the founder of the guidance movement. In 1905, Professor Parsons became director of the Breadwinners Institute, which was a branch of the Civic Service House. Meyer Bloomfield was director of the Civic Service House. Thus, the two men worked in close association with one another. In his work as director, Professor Parsons gave direct vocational assistance to many men and women. He had thus laid the basis for the Vocation Bureau in

his work in connection with the Breadwinners Institute. In the first report of the Vocation Bureau, Professor Parsons used the term "vocational guidance" with almost the same significance as that now accepted.

This work resulted in the appointment of the Committee on Vocational Advice by the Boston School Committee, in 1909. In 1910, this committee reported that a vocational counselor had been appointed in every high school in Boston This resulted in the founding of the Boston Placement Bureau, in 1912. This was brought about by the cooperation of the Children's Welfare League and the Women's Municipal League. In 1915, the Boston School Committee established the Department of Vocational Guidance under the direction of Miss Susan J. Ginn. During the same period, from 1910 to 1915, other cities were active in the organization of vocational guidance work. Among these, possibly the most important were Grand Rapids, Mich. (under the leadership of Jesse B. Davis), Hartford, Conn , New York, Philadelphia, Cincinnati, and Chicago Many other cities conducted investigations into the working conditions of young people and contributed very materially to the development of the movement.

Very influential in this development were the various Conferences on Vocational Guidance. The Boston Conference held under the joint auspices of the Vocation Bureau and the Chamber of Commerce, in 1910, was probably the first one of the kind to be held. Another conference of a similar nature was held in New York, in 1912; and, in 1913, the National Vocational Guidance Association was founded at a meeting in Grand Rapids, Mich

3. *National Vocational Guidance Association.*—Since that time, the movement has grown very rapidly. This is evidenced partly by the growth of the National Vocational Guidance Association. For several years, the meetings of this association were small and attracted very little attention On Apr. 1, 1934, there were 35 branch associations scattered throughout the country, and the total paid membership of the National Association was 1323 There were 443 national members and 880 branch members. The meetings in February, 1934, covered a period of four days. There were 436 different people who registered, in addition to many more, not registered, who attended the meetings. *The*

Vocational Guidance Magazine, begun in 1915 as a modest four-page bulletin, contained in February, 1934, ninety-six pages and was a real magazine. It had on Feb. 1, 1934, a paid circulation of 2,110, as compared with 603 on August, 1923.

The national association, through a special committee, has compiled a list of consultants that should prove to be very helpful in organizing and promoting guidance activities in different parts of the country. Over one hundred competent men and women have consented to act as consultants on various aspects of guidance. These are distributed in such a way as to make available in all sections someone who can give assistance and who is near enough to be obtained with little expense. Because of the possible burden for such consultation, the list will be changed every two or three years. The names of consultants and the types of consultant service represented by each may be obtained by writing to the executive secretary of the association or the National Occupational Conference.

4 *The National Occupational Conference.*—During the year 1932–1933, it became apparent that if the magazine were to continue and to meet the increasing demands of guidance workers throughout the country, some outside means of financing it must be found The active interest of the Carnegie Corporation was secured; this resulted in the formation by them of the National Occupational Conference. To that organization funds were given for the purpose of assisting in the general movement of guidance and stimulating research along occupational lines. In February, 1933, a definite plan was formulated by the National Vocational Guidance Association and accepted by which the National Occupational Conference would take over the publication of the magazine and assist the national association financially in its general work.

As a result of this, the magazine has been still further enlarged and greatly improved in every way. It is still the official organ of the national association. Its name has been changed to *Occupations—The Vocational Guidance Magazine.*

The National Occupational Conference has materially promoted the cause of guidance in various ways. The most outstanding contribution has been the organization and financing of regional conferences on guidance problems. Up to May, 1933, the following conferences have been held:

Northeastern Regional Conference, Camp Stevens, Johnsonburg, N. J, Aug. 28–Sept 2, 1933

Western Conference, International House, Berkeley, Calif, Dec. 29, 1933–Jan 4, 1934.

Southern Conference, University of North Carolina, Chapel Hill, N. C, Apr. 23–28, 1934.

These conferences have brought guidance experts, business and professional workers, superintendents, principals, and teachers together for a definite intensive study of guidance principles and problems. Out of these conferences have come some of the best formulations of the principles of guidance that have ever been made. Divergent views have been clearly formulated, analyzed, and discussed, and real issues presented Possibly, the most important results have come from bringing guidance workers into close and intimate contact with one another and thus promoting a very real and effective professional attitude. The stimulation to guidance that has come as a result of such conferences has been very marked.

In addition to these conferences, funds have been given by the Carnegie Corporation, on the recommendation of the National Occupational Conference, to individuals and organizations for conducting eleven research studies. Many more are under consideration.

5. *Present Status.*—In 1918, the Bureau of Education[1] sent out a postcard inquiry to 10,400 four-year high schools in the United States requesting data on "departments or bureaus designed to assist young persons in securing employment." Of the 5,628 schools replying, 932 reported vocation bureaus, employment departments, or similar devices for placing pupils

While definite data are not at hand showing the present status of the guidance work in our schools, it may be confidently asserted that there is practically no city of over 10,000 inhabitants that does not have some form of definite guidance activity. These activities are often not completely organized but they are sufficiently developed to show that the school is conscious of the problem and is really attempting to assist the students in meeting important crises.

[1] RYAN, W CARSON, JR., Vocational Guidance and the Public Schools, *U S Bureau of Education Bulletin* 1918, No. 24, p. 36.

II. CHANGES IN EMPHASIS

1. *Original Emphasis.*—Even this brief description of the development of guidance has shown that in its beginnings it was distinctly a vocational guidance movement; it was directed mainly toward assisting the individual in making vocational choices and in securing employment This was, at the time, the greatest apparent need But guidance has progressed far beyond this point. The very attempt to help young people in vocational choices inevitably revealed other needs that in many cases transcended in importance the vocational needs. Many times the boy was not ready to take a position; he needed further training Often, the need was a health need, a moral need, or a recreational need. Gradually, but surely, we have come to realize that guidance is not something that concerns only a part of the individual; nor does it deal merely with a part of his life. The need is for "whole-child" guidance. At one time a particular need may be of paramount importance, but even then we must be careful not to distort the point of view, not to overemphasize a present need, however real and imperative this need may be.

2 *Broader Point of View.*—One of the significant changes in the guidance movement is this broadening of the point of view. Vocational guidance is still recognized as a very important part of guidance but it no longer occupies the entire stage. One of the great dangers to the proper development of the movement is that guidance workers will not see that the movement is, and must be, broader than the vocational field. Life is more than vocation; problems are by no means confined to vocations; crises that are not concerned with vocations occur continually in the lives of young people, and any attempt to interpret them in terms of vocations will be fatal.

We cannot conceal the essential nature of life problems by labeling them "vocational" The objection that this point of view makes the problem of guidance too broad and too complex is unconvincing. Guidance *is* broad; it *is* complex; no amount of verbal juggling or restricted nomenclature can conceal the fact. We should face the issue squarely, recognize the complexity of the problem, and guard ourselves against the misunder-

standing that will inevitably follow any attempt to restrict guidance merely to vocational problems

III. The Effect of the Guidance Movement

1. *Complexity of Educational Reforms* —It is difficult to tell definitely what effect the guidance movement has had upon education. There are very few, if any, educational movements that can with any degree of certainty be said to have had this or that specific influence. Nearly all reforms in educational theory and practice are the results of the general acceptance of certain more or less fundamental principles They may be explained most often by describing them as but different phases of some principle or truth that underlies all and that has been accepted. This truth finds expression in various ways in different parts of the country; these are but different attempts to interpret the educational *Zeitgeist.*

2. *Presence of Guidance in All Educational Reforms* —Whether we can assign any definite place to guidance as an influence in modern reforms in education or not, we can at least confidently affirm that guidance is clearly associated with practically all modern movements in education. Recognition of the importance of individual differences in need as a basis for curriculum construction, for methods of teaching, and for organization of school life is undoubtedly one of the outstanding principles fundamental to all modern educational reforms This is the principle upon which guidance is built. Another expression of this principle is the movement towards individualized instruction. The junior high school developed largely from the same principle The center and life of the junior high school is guidance. The fundamental purpose of this new institution is expressed in guidance terms—exploration, experimentation, try-out, provisional choice. The junior high school is the place where definite attempt is made to assist students in making important choices. The entire organization gets its motive and its plan from guidance. It is so with child accounting, with tests and measurements, especially the diagnostic testing program Diagnosis and guidance are inseparable, remedial work is but the result of a guidance program.

IV. THE EVALUATION OF GUIDANCE

A. GENERAL SURVEY OF INVESTIGATIONS

1. *Types of Investigation* —With the emphasis upon tests and measurements in education that has been everywhere apparent, it is not surprising that attempts should be made to evaluate guidance activities. A survey of such investigations was made by a committee of the National Vocational Guidance Association and reported at the meeting in Minneapolis in February, 1933 [1] This Committee on the Evaluation of Guidance was composed of the following John M Brewer, Mildred Lincoln, H. A. Edgerton, William M. Proctor, Roy Hinderman, and Grayson N. Kefauver. The study was twofold (1) a collection of the judgments of professors of courses in guidance and of directors of guidance concerning the relative importance of various lines of investigation and (2) a study of articles on guidance in five magazines during the five years 1927–1928 to 1931–1932

Table XXXIX[2] gives a general view of the number and character of the articles surveyed

Of these articles, only 140 out of 461 were real investigations. The most frequent of these were the following types:

No 6 Construct and validate improved measures of characteristics of individuals
No 2 Analyze and describe guidance practice
No 7 Investigate nature and extent of capacity of individuals
No 3 Investigate occupational conditions and opportunities
No 8 Make follow-up of students going into industry and to higher institutions

Of these, only No 2 and No. 8 can be said to bear directly upon the evaluation of guidance.

9, 10, and 11 all deal with evaluation, but there were only three of such investigations reported during those years. Some of the other investigations deal somewhat with the effectiveness of certain instruments now used in guidance, but deal only indirectly, if at all, with the evaluation of guidance as such.

[1] KEFAUVER, GRAYSON N, and DAVIS, ALBERT M, Investigations in Guidance Occupations, *The Vocational Guidance Magazine*, 12. 17–25, November, 1933.
[2] KEFAUVER, GRAYSON N., and DAVIS, ALFRED M, *op cit*, p. 22

TABLE XXXIX.—NUMBER OF ARTICLES ON GUIDANCE APPEARING IN FIVE MAGAZINES* IN DIFFERENT YEARS

Nature of Content of Article		1927–28	1928–29	1929–30	1930–31	1931–32	All Five Years
1. Evidence of need for guidance	1†	1	2	1	2	0	6
	2†	2	0	3	2	2	9
	T†	3	2	4	4	2	15
2. Analyze and describe guidance practice	1	7	6	2	6	5	26
	2	47	49	40	33	48	217
	T	54	55	42	39	53	243
3. Investigate occupational conditions and opportunities	1	4	3	3	2	5	17
	2	9	6	5	5	11	36
	T	13	9	8	7	16	53
4. Summarize judgments of experts in guidance concerning objectives and practices	1	0	0	0	0	0	0
	2	0	1	0	0	1	2
	T	0	1	0	0	1	2
5. Describe training and experience of guidance workers	1	0	1	0	2	0	3
	2	5	1	0	1	3	10
	T	5	2	0	3	3	13
6. Construct and validate improved measures of characteristics of individuals	1	10	9	13	5	9	46
	2	1	4	0	6	3	14
	T	11	13	13	11	12	60
7. Investigate nature and extent of variations of capacity of individuals	1	4	5	2	4	7	22
	2	0	3	6	3	2	14
	T	4	8	8	7	9	36
8. Make follow-up of students going into industry and to higher institutions	1	5	6	0	1	5	17
	2	2	3	1	2	2	10
	T	7	9	1	3	7	27
9. Measure results of existing programs of guidance	1	0	0	0	2	0	2
	2	1	2	0	1	1	5
	T	1	2	0	3	1	7
10. Set up well-planned program, follow through, and measure results	1	0	0	0	0	0	0
	2	0	0	0	0	1	1
	T	0	0	0	0	1	1
11. Analyze guidance materials	1	0	0	0	1	0	1
	2	0	0	1	0	2	3
	T	0	0	1	1	2	4
All problems	1	31	32	21	25	31	140
	2	67	69	56	53	76	321
	T	98	101	77	78	107	461

* *Industrial Arts and Vocational Education, Personnel Journal, School and Society, School Review, Vocational Guidance Magazine*

† 1—Articles reporting systematic investigation
2—Articles simply descriptive or statement of opinion
T—Total number of articles

2. *Relative Importance of Lines of Research.*—The other part of the study by Kefauver and Davis, while it does not indicate actual research, shows the lines of investigation that professors of courses in guidance and guidance directors think are the most important. Table XL,[1] taken from the article mentioned, indicates the ranking of the various items.

[1] KEFAUVER, GRAYSON N., and DAVIS, ALFRED M., *op. cit.*, p. 20.

TABLE XL — JUDGMENTS OF PROFESSORS OF COURSES IN GUIDANCE AND DIRECTORS OF GUIDANCE CONCERNING IMPORTANCE OF VARIOUS LINES OF INVESTIGATION

Line of investigation	Mean rating		Standard deviation of distribution of rating		Number judging each type most important	
	Professors (51)	Directors (10)	Professors (51)	Directors (10)	Professors (38)	Directors (7)
1 Evidence of need	1 82 ± 12	1 70 ± 21	1 29	1 1	5 3	0
2 Description of practices	2.33 ± 09	2 23 ± 17	91	78	2 6	0
3 Description of occupations	3 34 ± 09	3 10 ± 09	93	70	18 4	0
4 Judgments of need and desirable practices	2 31 ± 12	2 30 ± 17	1 24	78	2 6	0
5 Training and experience of guidance workers	1 71 ± 10	1 78 ± 09	1 02	41	5 3	0
6 Measure of characteristics of students	2 64 ± 11	3 10 ± 11	1 13	54	5 3	0
7 Variation of capacities of individual	2 18 ± 12	3 10 ± 11	1 29	54	0	0
8 Follow-up studies	3 24 ± 10	3 10 ± 09	1 05	70	2.6	0
9 Results of existing programs of guidance	3 26 ± 08	3 80 ± 08	82	40	2 6	42 9
10 Results of projected programs of guidance	3 80 ± 05	3 70 ± 10	49	46	52 6	57 1

Of the items that bear directly upon evaluation, 2, 8, 9 and 10, the preponderance of judgment of both groups is for the greater relative importance of investigations into the effectiveness of guidance service, either existing guidance service or a projected program of guidance. It would be difficult to imagine that there could be any result other than this. Everyone will agree that such investigations would be the most profitable The only question is can they be made satisfactorily at the present time?

3. *Review of Research by Kitson and Stover* —A very comprehensive and helpful review of research studies on the evaluation of guidance was made by Kitson and Stover.[1] These investigations are grouped under the following general heads:

[1] KITSON, HARRY D, and STOVER, EDGAR M, Measuring Vocational Guidance: A Summary of Attempts, *Personnel Journal*, 11 150–159, October, 1932.

1. Setting up standards for the organization of guidance activities and for measurement of outcomes
2. Value of information gathered about occupations
3. Measuring results of instruction given in classes in occupations.
4. Measuring results of individual counseling
5. Measuring effectiveness of placement

It will be noted that the last three only deal with measurement of the results of guidance in terms of the changes made in individual pupils.

B. INVESTIGATIONS INVOLVING EVALUATION

1. *Measuring the Outcomes of the Course in Occupations* [1]—One of the most complete investigations of the results of the courses in occupations was made by Miss Mildred Lincoln. This study is restricted to the attempt to measure certain outcomes of a certain instrument or method commonly used in guidance activities. It has the merit of concentrating upon a small element and the weakness of such concentration. The value of an enterprise cannot be successfully measured by taking the algebraic sum of the outcomes of all of its parts Each element might have a value, and yet the value of the whole be negligible. Some, at least, of the outcomes might be negative, and yet the whole may be valuable. The study is, however, very well done and merits careful consideration. A list of objectives of the course in occupations was compiled from an analysis of over seventy-five courses of study.

The three objectives found stated most frequently are

a. To give a broad, general survey of occupations in order to broaden the pupils' outlook on vocational life.

b. To assist pupils in orienting themselves to the school through study of its organization, curricula offered, values of school subjects, and right methods of study.

c. To study the relation between vocational requirements and the education and training needed to meet these requirements and thus to help pupils to make their educational plans in line with their vocational objectives.

[1] LINCOLN, MILDRED E, Measuring Outcomes of the Course in Occupations, *Occupations—The Vocational Guidance Magazine*, 12: 36–39, December, 1933 This is a brief abstract of a doctor's dissertation, Harvard University Press (not yet published).

Tests of vocational and educational information devised by Bremer and Lincoln were given to experimental groups of ninth-grade students before and after a semester course in occupations The same tests are given at the same times to a control group who did not take the course in occupations. Both the control and the experimental groups showed distinct gains in the items tested, but the experimental groups showed the larger gain, and the gain tends to become greater with the amount of instruction in such classes.

It must be said, however, that the difference between the two groups is disappointingly small. The gain achieved by the experimental group is statistically significant—that is, it is highly probable that the difference was influenced by the course in occupations. A difference that is significant statistically is, however, not necessarily significant educationally. The difference may not be enough to warrant the extra amount of time, energy, and money spent upon the course in occupations In view of the changing occupational situation, it may be that there is no longer a place for such a course. On the other hand, it is possible that the informational objective of such a course is not the most important one. Such studies, while not conclusive, give real assistance in several ways. (1) They give some indication of the degree to which we are attaining the objectives we have set up and that we try to measure. (2) They help us to restate and revalue the objectives of some guidance activities. (3) They require us to analyze and reorganize some of our technique.

2. *Measuring the Results of Individual Counseling.*—Three investigations will be discussed.

a. Experiment by Ruth Clark.[1]—This was an investigation conducted under the auspices of the Vocational Service for Juniors in New York City and attempted to find whether the individuals who followed the advice of the counselor succeeded better than those who did not. Five hundred fifty-six boys and girls were followed up for one and a half years Of those who followed the counselor's advice, 80 per cent were, in the opinion of the investigator, successful.

[1] CLARK, RUTH, An Experiment in Educational Guidance, *Vocational Guidance Magazine*, 1. 93–94, January, 1923.

b. Experiment by Morris Viteles.[1]—In this study, the purpose was to find how many followed the advice of the investigator and how many of these succeeded. This experiment was a follow up, after a period of two years, of seventy-five young people who were examined and counseled. The results as given by Viteles are:

> . . 58 per cent followed recommendation completely, 21 per cent partly followed recommendation None who followed advice failed to find employment, only seven had held more than two jobs Those who failed to follow advice in employment were earning more money but were mostly in "blind-alley" jobs. Of the children still in school, there were more failures among those who had not followed advice.

c. Study by Hedge and Hutson.[2]—In this investigation, the attempt was made to find whether a combination of a course in choosing an occupation and individual counseling resulted in a wiser choice of occupations and further schooling. The time elapsed was one year. The findings as reported by the authors were:

> Between September and May, the number of pupils planning on college training and professional careers was reduced 5 5 per cent, the number planning to enter skilled trades increased 4 5 per cent Students with the lower I Q 's, who had planned to enter college, changed their plans Before guidance, the median I Q. of students who planned to go to college was 108 1, after guidance, it was 111.4.

The results of these three studies are interesting but not convincing. In each, certain assumptions were made that are questionable, and the evaluations are largely in terms of the subjective judgment of the investigators. It is seldom safe, scientifically, for one who is himself vitally interested in a favorable result to set up an investigation whose evaluation of the results involves the personal judgment of the investigator. These studies are very suggestive of the necessity for improved techniques of research in this field.

[1] VITELES, MORRIS S., Validating the Clinical Method in Vocational Guidance, *Psychological Clinic*, 18· 69–77, 1929

[2] HEDGE, J W , and HUTSON, PERCIVAL W , A Technique for Evaluating Guidance Activities, *School Review*, 39: 508–519, September, 1931.

3. *The Prediction of Vocational Success.*[1]—The ten-year follow-up study by Thorndike already described (p. 151) has received wide publicity partly because of the extravagant claims made for it by some, and partly because of the character of the study itself. The results of this study show that after a period of ten years

. . . on the basis of such facts as were obtained from school records and test scores about boys and girls at age fourteen, their educational careers were predictable with great accuracy; but that there was little indication, as proved in the follow-up, as to what their vocational futures would be

This study is a very significant one and indicates the necessity for other investigations along the same general lines. One main criticism is that the tests used as a basis for prediction are not judged at present to be valid instruments for the purpose. The basis for judging vocational success is also not free from criticism. It is urged, also, with considerable merit, that the function of tests is not to predict *accurately* the future of individuals but merely to give counselors and pupils some indication of probable abilities and lack of abilities to be used in connection with other factors in deciding upon future activities.

4. *The Carnegie Study of the Measurable Results of Guidance Programs.*[2]—The most ambitious attempt at evaluation yet made was the two-year study made by Kefauver and Hand under a subvention of the Carnegie Corporation. In this study, the attempt was made to measure the results of programs of guidance in certain cities. Some of these had well-organized programs of guidance, and others had poorly organized programs or none at all. Two general questions were formulated: (1) Are certain programs more effective than others in achieving the objectives of guidance? (2) Are any of the existing programs of guidance adequate to bring about the proper distribution and adjustment of students? Two general lines of investigation were used. (1) a follow-up of students who had had guidance service to determine

[1] THORNDIKE, E L., and others, The Prediction of Vocational Success, New York: The Commonwealth Fund, 1934.

[2] KEFAUVER, GRAYSON, W , and HAND, HAROLD C , An Appraisal of Guidance, *Occupations—The Vocational Guidance Magazine*, 12: 53–58, June, 1933. This is a preliminary statement of the study

whether the desired change took place after the service was provided and (2) a comparison of students in schools with and without systematic programs of guidance or a comparison of students in schools with different patterns of guidance service

The first step in this investigation was to set up certain outcomes that were considered to be desirable for guidance programs and that could be measured. In all, thirty-three of these outcomes were set up. Among these were

1 Proportion of students with educational plans
2 Degree of harmony between educational plans and capacity
3 Harmony between vocational choices and educational plans
4. Proportions of students with vocational choices and preferences
5. Harmony between vocational choice and capacity
6. Extent to which students are working up to capacity
7. Amount of maladjustment toward the curriculum
8 Accuracy of students' self-rating
9. Extent to which students are able to recognize types of false guidance
10. Nature of reasons for choices of curricula and subjects
11. The extent to which students are aware of the vocations that may be trained for in the high school
12 Nature of reasons for dropping out of school

It is impossible at this time (May, 1934) to give any summary of the findings, since the report has not been published. A few of the results have been given in summary form by the authors. Among the results of that part of the study that dealt with a comparison of two groups, an "unguided" and a "guided" group may be mentioned. (1) The percentage of students with definite vocational choices was 67.7 for the unguided group and 65.8 for the guided group. (2) The mean intelligence quotient of students planning to enter the professions is 104.2 for the unguided group and 117.5 for the guided group. (3) In extent of vocational information, the two groups were nearly identical. (4) The knowledge possessed by students who wish to go to college regarding college entrance requirements was much greater among the guided than among the unguided group. (5) There was practically no difference in the adjustment of the two groups

So far, the published reports show little significant difference between the two groups. There are so many questionable assumptions made in the different outcomes and in the methods of measuring these that the results, whatever they may be, will have little validity. The study will, however, have two very

helpful results: (1) It will help to clear up differences in points of view and in formulations of the outcomes of guidance. (2) It will point out important differences in the organization of guidance programs and in the emphasis upon different outcomes.

5. *Measuring the Effectiveness of Placement*.—There are numerous reports and descriptions of placement bureaus. Many of these show truly remarkable results in number and kind of placements. Such bureaus may be said to have been successful if they have secured jobs of any kind for workers, during this period of unemployment. Few of these reports, however, try to study the placements in terms of the counseling done in schools or in terms of any guidance activity other than placement itself. Kitson and Stover[1] report a few such studies, but they are investigations into the placement of handicapped persons.

C. GENERAL CONCLUSIONS REGARDING EVALUATION

The attempts at evaluation indicate a very healthy attitude on the part of guidance workers. It shows that they see the necessity for trying to check up on the results of guidance activities and are not afraid to make a beginning.

They reveal the necessity for clear statements of the objectives that we are trying to reach by means of various guidance activities and for setting up experiments for determining desirable and effective techniques. Until these are done, evaluation procedures will be ineffective. In spite of the criticisms made of the attempts to analyze guidance activities, such procedures are well worth while. One may even affirm that in the present status of guidance throughout the country, they will bring the most immediate and worth-while results. Guidance workers are fairly well agreed upon the major needs of pupils which guidance aims to meet. They need:

1. Information regarding occupations and schools and colleges.
2. Information regarding their own abilities and capacities.
3. Assistance in thinking through their problems and aiming at an intelligent solution.
4. Assistance in gaining entrance to a school or an occupation.
5. Assistance in adjustment to the school and the occupation.

An analysis of the facilities of the school will speedily reveal whether or not there is any agency whose duty it is to give assist-

[1] KITSON, HARRY D., and STOVER, EDGAR M., *op. cit.*

ance in any of these lines To be sure, we want to know whether the assistance is effective, but first we must organize the school so that such assistance will be not only possible but definitely planned for. In thousands of high schools throughout the country, no attempt is made to help students secure information about colleges. This is a simple matter, but there must be someone in the school whose duty it is to get this information.

We need and shall always need to give time and attention to the evaluation of results, but just now, especially, it would seem wiser to concentrate upon providing guidance facilities in our schools, to make teachers and principals guidance conscious, even though we may be sure that the methods used will not always be the most wise and effective ones.

V. The Future of Guidance

1 *Present Crisis in Guidance*—The guidance movement in the United States is at a very critical stage of its development We clearly see that the work cannot be confined to help given in connection with vocations. Guidance is in and through all education Every part of the school system is and must be definitely concerned in it. There is real danger that the movement will become so broad as to be practically meaningless and dissipate itself into the thin air of general education or of general instruction This is one reason for the insistence upon the use of the term "vocational guidance" But, as we have already said, to use the term "vocational" to describe *all* guidance is merely to befog the issue, it does not solve the problem Safety for the future lies in clear recognition of the complexity of guidance as a problem, and then taking such measures as we can to work out a proper solution.

2 *Guidance Needs.*—The greatest needs of guidance today are

1 A complete listing and description of the situations in the lives of young people that call for guidance, with especial reference to the most important ones—the times of crisis.

2 Devising ways in which adequate and proper help can be given to meet these crises

3 Utilization of all the forces in the school to give the needed help.

4 Coordination of the forces of the school so that each teacher will know what he is chiefly responsible for in the guidance program and how he is to assist other teachers in their part of the work

5 Organization of the school in all its phases, curriculum, school life, management, etc, so that the guidance program can be carried out most effectively

3. *Teachers as Guides*—We should not expect that, in the development of guidance, all forms of assistance will be organized under a guidance bureau. That would be extremely inefficient We should rather expect that the guidance aspect of education, of teaching, of learning will be more clearly seen by teachers, that their methods will be founded on guidance rather than on ways of "giving instruction," that the teacher will think of himself as a guide rather than as a ruler or a dictator.

4 *Development of Experts.*—In addition to this we shall develop experts in various lines who shall be of two kinds:

(1) Those who gather reliable information that will assist in guiding students.

(2) Those who counsel students on matters that relate to problems other than class work—social adjustments, choice of courses and schools, vocational problems, and other vital matters not definitely provided for in organized classes. It is quite probable that some of the matters now taken up only by these experts in counseling may, in the future, be organized into definite courses and become part of our regular curricular program.

5. *Flexibility of Guidance Programs.*—Probably the most hopeful aspect of the entire guidance program is that it has not yet become crystallized; its organization is not yet definitely fixed The scope of work itself and the agencies utilized for it are still fluid enough to provide for adaptation to needs as they arise. If guidance programs and organization continue to be responsive to changing conditions and the varying needs in different cities, we may confidently hope for great development in the years just ahead.

QUESTIONS

1 How is guidance related to education?
2. What is the guidance function of the junior high school?
3 What is the danger of calling all guidance "vocational guidance?"
4 Should all cities have the same organization for guidance?
5 What is the place of the expert in guidance and how is this related to the place of the teacher?

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